

Time Is on
Russia's Side P. 46

Now — DF Equipment
for Gondolas

October 21, 1957

RAILWAY AGE *weekly*



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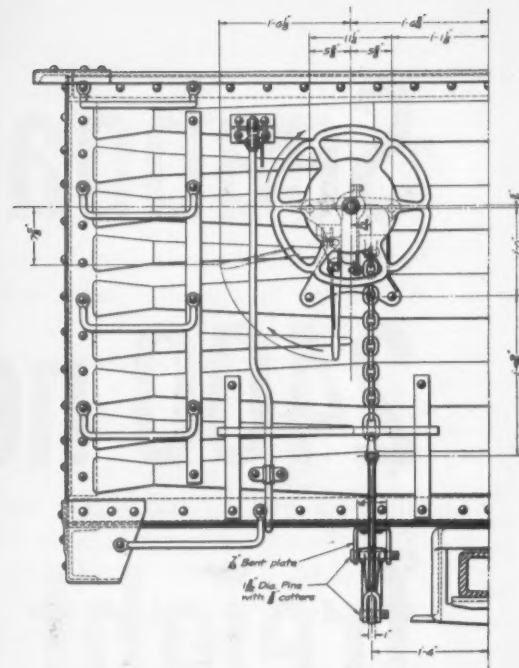
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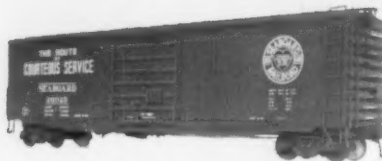
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Week at a Glance

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How about shorter trains—oftener?p. 9

Operating expenses might be increased but cuts in car delays and increased business would surely make up the difference, RSPA is told. "Middle-distance" passenger service and equipment is advocated.

Santa Fe strike vote closes October 26p.11

Union shop dispute marks time while the 15 non-operating unions involved proceed with their balloting. Any statement on the unions' subsequent action probably will not be made until at least a week after the end of balloting, the chairman of the non-ops' conference committee told Railway Age.

Now—DF equipment for gondolasp.15

More revenue per car-mile and reduction in damage claims and handling costs are among the advantages of gondola cars equipped for damage-free service. The gondola arrangement was jointly developed by the National Carbon Company and the Evans Products Company, working closely with the Union Pacific and the Chesapeake & Ohio. The DF gondola, it is predicted, will find a place in many industries handling a wide variety of products.

Passenger business needs supermarket sellingp.18

A properly planned and marketed railroad passenger service can attract and hold passengers and revenue. This statement, James G. Lyne—editor of Railway Age—told the annual meeting of the American Association of Passenger Traffic Officers, undoubtedly reflects the opinion of most members of the association. Given the proper treatment, he added, passenger service can again be as spry as it ever was, "maybe even more so."

Microwave—Santa Fe found it cheaperp.21

To obtain details about the road's installation of microwave to provide communications to the end of a new branch line, a Railway Age editor interviewed J. A. Parkinson, Santa Fe general superintendent of communications and signals. Here is the reasoning behind the road's confidence in microwave.

Newest yard is built to grow with trafficp.26

Geared for speed and roomy enough for all the volume of the merged L&N-NC&StL lines, the new Hills Park yard, gouged out of rough Georgia terrain, is a fully automated layout. It has the capacity to move 2,000 cars a day through its up-to-the-minute classification system. Space is provided for 16 additional classification tracks—room enough to handle any foreseeable traffic growth.

The Action Page—Time is on Russia's sidep.46

When you come right down to it, America is a giant manufacturing plant—and the main assembly line is our railroad system. This assembly line, of overwhelming importance to the very existence of the free world, is being banged and battered throughout the 48 states by inequitable taxes, one-sided regulation, and enormous subsidies to rival types of transportation. What are **your** ideas for effective action now, to awaken Americans to this outrage?

Short and Significant

A program to award four-year college scholarships . . .

to outstanding American Indian students has been begun by the Santa Fe Foundation, a non-profit corporation sponsored by the Santa Fe. Two scholarships are being awarded for the current school year; the plan will be expanded to four awards annually next year. The scholarships are available only to Indian students living in states served by the railroad.

For development of the diesel-electric locomotive . . .

which helped revolutionize American railroading, the Elmer A. Sperry Award has been presented to three present or former officers and four departmental groups of the Electro-Motive Division of General Motors. The individuals honored are Harold L. Hamilton, retired GM vice-president and founder of EMD; Richard M. Dilworth (retired), chief engineer from 1926 to 1951; and Eugene W. Kettering, director of research.

'Railweight' test scheduled . . .

'Railweight,' the so-called Marden method of freight car weighing, will be demonstrated October 30 at the Monon's South Hammond, Ind., yard. Marden method procedure involves the weighing of individual cars while coupled and in motion.

GM&O 'cuts its coat after its cloth' . . .

In an open letter to Gulf, Mobile & Ohio employees, Chairman F. M. Hicks said the recently-granted freight rate increase is not enough to cover rising costs, announced items not essential to providing dependable service to patrons will be discontinued. Among the first to go: GM&O News, suspended after 36 years of publication; and hostess service on Chicago-St. Louis trains, inaugurated in 1935.

Right-of-way to become expressway . . .

A 3/4-mile stretch of Chicago, Aurora & Elgin right-of-way has been purchased for \$1.2 million by Cook County, Ill., to fill a gap in land for Chicago's Congress Expressway. CA&E tracks will be relocated north of the superhighway "in anticipation of a restoration of service."

**Week at a
Glance** CONT.

Current Statistics

Operating revenues, eight months	
1957	\$7,036,382,711
1956	6,950,408,794
Operating expenses, eight months	
1957	\$5,507,215,070
1956	5,370,373,130
Taxes, eight months	
1957	\$735,814,136
1956	731,061,595
Net railway operating income, eight months	
1957	\$615,229,126
1956	677,039,317
Net income estimated, eight months	
1957	\$474,000,000
1956	\$34,000,000
Average price 20 railroad stocks	
October 15, 1957	76.95
October 16, 1956	98.23
Carloadings revenue freight	
Forty weeks, 1957	27,883,858
Forty weeks, 1956	28,995,323
Average daily freight car surplus	
Wk. ended Oct. 12, 1957	12,660
Wk. ended Oct. 13, 1956	4,320
Average daily freight car shortage	
Wk. ended Oct. 12, 1957	1,869
Wk. ended Oct. 13, 1956	16,762
Freight cars on order	
September 1, 1957	79,258
September 1, 1956	122,870
Freight cars delivered	
Eight months, 1957	67,894
Eight months, 1956	43,897

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4 Key Reasons Why Hy-Rolls Are So Dependable, Economical

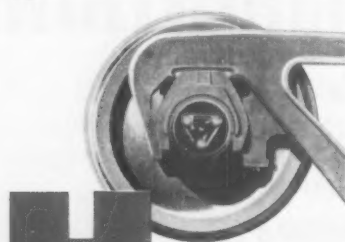
The Hy-Roll design is the culmination of HYATT's experience in building more time-tested straight cylindrical roller bearings than any other maker. It has four key features:


- 1** Straight cylindrical rollers provide greater load-carrying capacity and longer life.
- 2** Fewer parts simplify maintenance.
- 3** Generous race flanges absorb lateral thrusts.
- 4** Positive seals retain 3-year grease supply, prevent damage from foreign matter.

In April, 1954, 250 Louisville & Nashville 90-ton ore cars, equipped exclusively with HYATT Hy-Rolls, went into service hauling Venezuelan iron ore from the Mobile docks to Birmingham steel mills. Since then they have averaged 50 miles per day, or 58,050 miles per car as of June 1, 1957—a total of 14,512,500 car miles without a single hotbox delay. Compare this record with your average car mileage per hotbox and you'll see why more and more lines are switching to HYATT Hy-Rolls!

What's more, Hy-Rolls practically eliminate inspection-lubrication costs and delays. And they assure substantial added savings on upkeep because they have fewer parts than other roller bearings, plus such longer-life features as races forged of finest high-nickel steel.

Remember—a freight car can earn a lot more net profit when you replace its "Achilles heels" with HYATT Hy-Roll Bearings! Hyatt Bearings Div., General Motors Corporation, Harrison, N.J.



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to railroad
progress

HYATT

HY-ROLL BEARINGS

FOR NON-STOP FREIGHT

How About Short Trains—Often?

Adoption could lead to better use of all rolling stock and facilities — Passenger equipment specifically designed for middle-distance travel can produce big operating savings, RSPA is told.

Railroads can't consider locomotive utilization in a vacuum. Train schedules, yard operation, equipment maintenance and other factors all have important roles in determining how much the railroads get out of their motive power.

This is the message, stressed by speaker after speaker, at the Railway Systems & Procedures Association Chicago meeting October 8-10. Theme of the meeting was equipment utilization, with the accent on motive power.

A progression of systematic studies involving use of shorter freight trains was advocated by Dr. Russell L. Ackoff of Case Institute's Operations Research staff.

In one approach to solving the power use problem, the carrier would seek to minimize the cost of operations while maintaining or decreasing delivery times of freight cars. A more preferable approach (because it is "expansionist") minimizes delivery times while maintaining or decreasing operating costs, Dr. Ackoff held.

Other speakers at the sessions included Boston & Maine President Patrick B. McGinnis—who endorsed the "Symes Plan" for a government-financed car pool "because I need it and so does every other railroad in the east"—and New York Central Operating Vice-President John F. Nash. Mr. Nash described Central efforts

"to evaluate the competitive outlook for our railroad and the resulting effect on long term improvement and development programs" through creation of the job of director of transportation and economic research.

Recommendations for middle-distance passenger service were presented jointly by A. R. Cripe, Chesapeake & Ohio director of design, and J. S. Gallagher, Jr., NYC director of passenger research.

Dr. Ackoff said he thought it likely that the running of shorter freight trains with less intermediate classification might very well permit better locomotive (and car) utilization.

Locomotive operating expense, he conceded, would be increased, but the saving in delay to cars might more than offset it. Even with some temporary overall cost increase, he considered it likely that the improved service would increase business. Only a small improvement here would be needed to make up for higher operating costs of the plan, he said.

Dr. Ackoff suggested that the frequency of freight train service between two cities, where rail service matched truck service, should be determined in figuring costs. "From a knowledge of the rate of arrival at the point of origin for delivery to the designated destination, the average 'design' length of train could be determined. Next we could obtain, on the incremental cost

basis, the cost of haulage for the computed train length. The saving in classification costs resulting from through trains could be found.

"Apart from the direct shortening of turnaround time due to faster loaded trains it appears likely that with existing motive power such trains would have spare capacity for hauling returning empties," Dr. Ackoff continued. "One reason for the relatively slow movement of empties is the low priority they receive. Consequently, with locomotives and sidings loaded nearly to capacity with 'fulls,' empties often have to be dropped off or bypassed enroute, to maintain space for loads. Thus, more frequent shorter trains should result in saving in freight cars due to better turnaround times."

Once the results for movements between one pair of cities had been determined it would be possible to continue the analysis for other pairs until the whole of a system had been covered, Dr. Ackoff said. A method similar to that used by the Southern Pacific in determining how many empties should be moved between divisions to satisfy the need for cars for loading probably could be used, he added.

Admittedly, Dr. Ackoff concluded, such a study would be costly and should include definitive data on the use of cars by both carriers and their patrons. Prob-
(Continued on next page)

McGinnis Urges Functional Mergers Stressing Service

We have got too many railroads . . . 36 east of the Mississippi and north of the Ohio . . . and they are just like 36 farmers. Try and get all 36 to agree on any major topic. . . We don't need them. We should have two. . . We would save money of course but that is the wrong reason for mergers and consolidation. . . It is not economy that is important. Service is.

I think we should have right now in the east functional mergers, ignoring corporate lines. . .

I suggest that this age-old theory that a piece of new equipment must be tested and tried on 17 different railroads . . . be stopped . . . I think if a supplier has an idea and he tries to sell it . . . some railroads ought to join with him in developing it . . .

Why must we go on forever arguing the virtues of roller bearings vs. solid bearings when the hot box record last summer was the worst in the history of American railroading? . . .

Now in the days of moons flying around the world can't we find

a better coupler with the air hose in it that will couple together automatically? . . .

We are spending thousands of dollars on protecting lading . . . to protect ourselves against impact. We are not attacking the problem. We are eating aspirin . . .

We introduced a new service, piggyback . . . everybody has his own tiedown. There are seven of them now and if we don't stop it every railroad will have its own tiedown on piggyback. Let's figure out the best one and buy them for half price . . .

How long are we going to sit with two rails to run trains on and not do it automatically? . . .

Are we going to sit there until we lose all to these unregulated carriers or are we finally going to say . . . "we will make bulk rates, agreed rates, quantity rates."

—Excerpts from address by B&M President P. B. McGinnis to RSPA meeting.

ably no one railroad could afford the cost of such a study but the costs could be shared, he said. Then, once the pattern of action for one road had been determined, the benefits gradually would be extended to all carriers.

Effective utilization of all equipment also will play a large part in making passenger service pay, according to Mr. Cripe and Mr. Gallagher.

One of the first things they said must be done is to remove from the railroads some of the artificial restrictions which now make it impossible for them to compete for the business. Also, they said, union make-work rules must be done away with and some agreement on realistic mail pay must be reached with the Post Office Department.

They contended that the carriers should tailor their services to get the business they can handle best—middle-distance travel. They said equipment designed for that service should be purchased.

Middle-distance passenger business was defined by Mr. Gallagher as that moving 100-500 miles. This, he said, is the business which commercial land carriers can best hope to capture, because the distances are too great for convenient auto travel, too short for economical air flights.

The equipment to handle such business profitably would be built into trains large enough to handle 200 passengers, with baggage service and meals, Mr. Cripe said. It wouldn't have to be turned because it would have motive power on each end, he said, indicating that the C&O now is refitting some Budd RDC cars to conform to this prescription. Several such trains could be coupled together to make longer trains if this were desirable.

Presentations by E. S. Rupp, assistant to vice-president—operations and maintenance, Baltimore & Ohio, and E. K. Bloss, general mechanical superintendent, Boston & Maine, indicated that high utilization of the Budd RDC equipment

was playing a vital part in reducing their roads' passenger service losses.

Mr. Rupp said that purchase of 12 RDC's enabled the B&O to retire 12 steam locomotives and 29 passenger cars. He indicated that in all cases where the B&O was using RDC equipment, operating expenses were cut by 40-50%, while passenger revenues increased substantially. Mr. Bloss calculated that the B&O's 103 RDC's were producing net savings of about 10% per year, compared with the cost of operating older equipment. Thus the equipment is expected to pay for itself completely in 10 years.

ERPC, Carl Byoir to Appeal in Truck Suit

Stung by an adverse ruling which still might cost a total of a million dollars, eastern railroads last week were preparing an appeal in the truck vs. rail damage suit.

U.S. District Judge T. J. Clary granted some 37 truckers nominal damages in their suit against the railroads for \$250,000,000 in an alleged conspiracy in restraint of trade (Railway Age, Oct. 14, p. 7). A railroad countersuit for \$120,000,000 was dismissed.

Eastern Railroad Presidents Conference Chairman David Mackie announced the railroads will appeal as soon as an order is issued implementing Judge Clary's ruling. Gerry Swinehart, board chairman of Carl Byoir & Associates, public relations counsel to ERPC and a co-defendant, announced the firm will join in the appeal. He said "basic American freedoms" were the fundamental issues in the case. "We believe that any group or individual has the right, under the First Amendment, to state its position publicly."

Deferring an award to the Pennsylvania Motor Truck Association, Judge Clary indicated the amount involved here would be substantially more than the \$6.66 total award to individual truckers. He cited the expenses the PMTA had encountered in the suit—expenses put at over \$300,000 by a trucker lawyer who was quoted as saying treble damages could be expected.

12 Railroads Paid Fines Totalling \$4,500 in September

Twelve railroads in September paid fines totaling \$4,500, plus costs, on 50 counts involving violations of the Safety Appliance, Hours of Service and Accident Reports acts.

This was reported by the ICC which also said that the largest amount, \$900 and costs, was paid by the Denver & Rio Grande Western for four violations of the Safety Appliance Acts and five violations of the Hours of Service Act. Next came payments totaling \$800 and costs by the Chicago, St. Paul, Minneapolis & Omaha for eight violations of the Safety Appliance Acts.

Watching Washington *with Walter Taft*

● **ICC MEMBERS** have been making new "pitches" for commission power to impose penalty per diem rates and thus use the car-rental charge as a means of promoting more efficient utilization of equipment. Bills to carry out this commission recommendation failed of enactment at this year's Congressional session, but they remain alive for consideration at the next session.

● **MAJOR WEAKNESS** in present car-service provisions of the act is what Commissioner Tuggle said recently of the absence of penalty per diem powers. He is in charge of the commission's car service work. About the same time, Commissioner Minor was saying the commission considers such powers "essential to insure adequate control of freight car distribution." He is a member of the commission's Legislative Committee.

● **REORGANIZATION OF ICC TRAFFIC BUREAU** puts the work of that commission unit on a functionalized basis. Matters involving tariffs, rates and practices of all types of carriers will hereafter be handled by the reorganized bureau's two sections—Section of Tariffs and Section of Rates and Informal Cases. The former set-up was departmentalized in three sections—Rail Tariffs, Motor Tariffs, and Informal Cases.

● **TRUCKERS WILL OPPOSE** creation of a Federal Government agency to purchase equipment for lease to railroads, as proposed by eastern roads under the leadership of President J. M. Symes of the Pennsylvania. The Executive Committee of American Trucking Associations has condemned the plan as "socialistic," and asserted that it would "grant a direct subsidy to the railroads."

● **SUBSIDY CHARGE** is denied by Mr. Symes. He insists that the proposed rentals and other fees would leave the government agency whole, and thus there would be no abandonment by the railroads of the principle that users of government-provided transportation facilities should pay the full cost of such facilities. On the same basis, the PRR president would have no objection to making the proposed agency's services available to truckers and air lines.



PRR Trestle Dislodged by Flood Is Restored "By the Numbers"

Piece by piece Pennsylvania Railroad work crews picked up the dislodged trestle, shown in the photo at the left after a recent flood, and put it back in place as seen at right. Damage was done in flood aftermath of Hurricane Audrie June 28. Trestle spans Little Raccoon Creek near Waveland, Ind., on the PRR's

Crawfordsville Branch. Thirty miles of the line was virtually wiped out but has now been restored to full service. Trestle project involved dismantling track, ties and stringers, numbering them, and putting the whole back together. Job consumed 40,000 man-hours.

Santa Fe Strike Vote Closes October 26

Union shop dispute marks time while non-operating employees proceed with balloting; statement on union's course of action expected about one week after end of voting.

The Santa Fe union shop case marked time last week, pending completion of a strike ballot being taken by the non-operating unions involved in the dispute.

G. E. Leighty, president of the Order of Railroad Telegraphers and chairman of the non-ops' joint conference committee, told *Railway Age* the balloting will close October 26. Any statement on the unions' course of action, he indicated, will probably not be made until at least a week after the end of voting.

Progress of the balloting was accompanied by some drop-off in the verbal fireworks that came with the start of

voting. At that time, Santa Fe charged that the voting methods being used—in which employees were required to sign their ballots—"will inevitably create an atmosphere under which a free and untrammelled expression of the individual employees will be made exceedingly difficult and probably impossible."

The unions countered with the statement that signed ballots are required as a means of assuring that votes cast are those of persons who have a right to vote.

The carrier and the non-ops also differed on the issues in the dispute. Santa

Fe contended that the "single point of disagreement . . . is whether the company should discharge employees for the failure to pay money to the unions which would be used for political purposes."

This contention, the unions replied, is a "smokescreen." The real issue, they declared, lies in Santa Fe's not making an agreement in line with an emergency board recommendation of five years ago.

A union statement also rapped a proposal by Santa Fe Chairman Fred G. Gurley and President Ernest S. Marsh suggesting a series of meeting between employees and carrier officials to discuss the issues in the case (*Railway Age*, Oct. 7, p. 14).

The current strike ballot is being taken among 15 non-operating organizations, which the unions claim represent some 50,000 employees.

AAPTO Ponders Future of Passenger Business

Passenger officers who attended the recent 94th annual meeting of the American Association of Passenger Traffic Officers in Bermuda found themselves face-to-face with one of the railroad industry's biggest dilemmas: which way is the passenger business going?

Both the optimists and the pessimists heard that in most instances "super-light-weight" low-slung trains haven't panned out as hoped; that some progress is being made to solve complicated interline ticketing problems; that a large unsold market exists in tying in rent-a-car services with

train travel; and that if railroads can't handle the task of mobilization in an emergency the government might have to take over.

J. J. Alms, the Burlington's general passenger traffic manager and chairman of the association's Committee on Development and Improvement to Train Service and Rail, Airline and Bus Equipment, termed the year just passed one in which a record amount of study and analysis was given to innovations and equipment.

Two more Budd "Slumbercoaches" will go into the Baltimore & Ohio's "Colum-

bian," probably in time for the summer season next year. The Chicago & North Western is expected to place orders shortly for a reported 16 cars for service between Chicago and Wisconsin points.

The Committee on Standard Forms of Interline Tickets and Association Ticket Paper reported that studies are under way at union terminals in Chicago, Cincinnati, Washington and St. Louis on the feasibility of installing Burroughs Ticketeers. C. E. Quackenbush, chairman and general passenger agent of the C&NW, reported that Ticketeers were installed last



Railroaders Host Jaycees

Planning a tour of Indianapolis rail-served industrial sites, Indianapolis Union Superintendent Leo F. McGrath reviews details with Margaret Bonke of the IU, left, and Rita Mae O'Gara, of the Pennsylvania. They were hostesses for train tour for 450 Junior Chamber of Commerce members and others from the city. Junior Chamber representative Jack Meek, rear, participated in planning for tour with sponsor—Indianapolis Railroad Community Committee.

year in the Dayton (Ohio) union station.

The warning that railroads must remain able to handle wartime mobilization came from Major General E. C. R. Lasher, executive director for traffic management, Military Traffic Management Agency. He said that railroads would again be expected to pick up the burden of domestic military traffic, and that if they couldn't do so both they and the armed services would be "on a spot" from which they might be removed by government intervention in the railroad business.

General Lasher repeated his agency's request that the railroads get together with military officials to discuss mobilization and reserve car fleets. Answers to both the military's problem and railroads' own declining passenger revenues might lie in joint action, he said.

A total of five million auto rentals are expected this year by Hertz Rent-A-Car System, declared William J. Jann, assistant to executive vice-president. A million of them will come from rail passengers, he said. Mr. Jann urged railroads to capitalize on this "vast unsold market" to bring passengers back to the rails with the offer of a car at their destination.

Formal Opening of New Frisco Yard Scheduled

The St. Louis-San Francisco's \$10,000,000 Tennessee Yard—first hump retarder yard to be built by Frisco—will be formally opened October 24. Railroad officers and some 400 business, civic, professional and government leaders from Memphis and the mid-South are to be on hand for the ceremonies.

The new facilities, replacing the outdated Yale Yard at Memphis, went into actual use in June, 1957.

Public Aid to Commuter Lines Urged

The New England Governors Committee on Public Transportation, in its final report just published, recommends government aid "to operators of commuter and intra-city passenger services necessary in the public interest, the revenue returns of which are less than the costs of rendering such service." The committee also favors "property and excise tax relief" for railroads and bus lines for service "which cannot be operated at a reasonable profit."

In developing public policy for transportation, the committee believes that governmental bodies should take account of all forms of transportation—"with due regard for the function and limitations of each form."

The committee reiterated its previous declarations favoring greater freedom of managerial discretion for regulated carriers; and greater reliance on competition, instead of regulation, in the establishment of rates for common carriers.

The committee also opposes consolidation of the Boston & Maine and the New Haven—but favors merger of the B&M with "a trunk-line system having a primary interest in the use of a New England port."

State laws should be re-examined, the committee believes, to provide greater uniformity in taxation of the several varieties of transportation; and federal excise taxes on transportation should be repealed.

C&NW Asks Relief from Labor Act

The Chicago & North Western has asked to be "relieved of the necessity of following procedures of the Railway Labor Act" in connection with its lease of the Chicago, St. Paul, Minneapolis & Omaha.

The request was contained in C&NW's reply to the Interstate Commerce Commission in answer to protest and motion by labor organizations to dismiss or deny the carrier's application for supplemental relief.

The North Western pointed out that an ICC order of December 28, 1956, approved and authorized the lease and unified operation of the Omaha lines and properties by the C&NW; and that the ICC "also expressly recognized that under Section 5(11) of the Interstate Commerce Act North Western was relieved 'from all restraints, limitations and prohibitions of Federal, State and municipal law necessary to enable the lease transaction to be carried into effect'."

The road said it has developed a "plan of integrated operations designed to achieve the operating efficiency contemplated by the commission's order. . . . North Western has repeatedly tried to confer with the labor organizations concerning these operational revisions. . . . An impasse has resulted from the insistence by certain labor organizations, i.e., the so-called operating brotherhoods or running crafts, that such discussions must occur only within the framework of a statutory scheme—the Railway Labor Act—and under the aegis of an administrative agency—the National Mediation Board—whose dominant purposes are unrelated to, and whose staff has no responsibility for achieving the legislative purposes of Section 5 of the Interstate Commerce Act."

In the ICS order authorizing the lease, the C&NW reply continued, "the commission stated that the parties were being relieved of all statutory provisions incompatible with the effectuation of the order. North Western has assumed that the Railway Labor Act was included within the

reach of that relief. Since the propriety of this assumption is put in issue by protestants, North Western now requests that it be expressly relieved of the necessity of following the procedures of the Railway Labor Act."

C&NW cited three examples to back up its declaration concerning operational revisions—in integration of road crew assignments, caboose runs and yard and terminal operations. Under present seniority arrangements, the road contended, three separate train crews are required to operate one train 195.9 miles between Mankato, Minn., and Des Moines, Iowa—"as part of the integration of operations. . . . North Western proposes to operate a single crew . . . 109.8 miles between Mankato and Eagle Grove, Iowa." Similarly, C&NW pointed out, present operations between Green Bay and Altoona, Wis., require use of three separate cabooses; the road's proposal is to operate one caboose over the 212-mile run. In yard operation integration, the carrier pointed to separate C&NW-Omaha operations at Ashland, Wis., and said it proposes to consolidate the two general freight yards into one yard which can be operated by two yard engine assignments and eliminate "an unnecessary interchange operation."

These examples, C&NW declared, "are typical of operating economies, which, in North Western's judgment, are necessary to achieve the effective integration of the properties and operations."

Ultimately, the road added, "any attempts to achieve effective integration within the bargaining framework of the Railway Labor Act can be entirely frustrated by the fact that no one under that statute can be compelled to reach agreement. Thus, if the commission should now reject jurisdiction completely and remit the parties to negotiations under the Railway Labor Act, the haphazard play of economic pressures alone will determine what degree of integration, if any, may be realized."

Car Fleet Up 3,798 Units in August

Class I roads installed 7,658 new freight cars in August, plus 173 for controlled refrigerator car lines, according to A. H. Gass, chairman of the AAR's Car Service Division. There were 3,860 Class I retirements during the month, plus 524 by the car lines, he reported.

Total installations for the first eight months (Class I road and controlled car lines), come to 64,038; retirements for the same period total 36,766.

Class I ownership, Mr. Gass reported, increased by 3,798 freight cars in August, 26,858 in the last eight months, and 30,465 in the last 12 months. He said there were 290 diesel and 30 gas-turbine units on order as of September 1.

Rails Seek Entry To Chicago Port

It's been the Rock Island vs. seven other Chicago area railroads for the past two and a half weeks in a high-stakes dispute involving rail service to Chicago's Lake Calumet port.

Rock Island is the lone road serving the port now; the seven other lines—Belt of Chicago, Chicago South Shore & South Bend, Illinois Central, Indiana Harbor Belt, Michigan Central, New York Central and Pennsylvania—are petitioning for ICC approval for their entry into the potentially rich harbor area.

The hearing on the petition, conducted by ICC Examiner Paul C. Albus, produced several interesting points, both in and out of the hearing room.

Possible development of a second Chicago port—in the down district—cropped up in testimony by IC President Wayne Johnston and again in a statement from the Chicago & North Western. Mr. Johnston cited possible private financing of a port on IC property along Lake Michigan; and C&NW, not a party to the present ICC case, came up with indications it might be willing to invest in development of downtown port facilities in the area served by the road.

The Pennsylvania, which bought property on Lake Calumet last year, said it is considering construction of facilities for trans-shipment of coal and grain.

Pennsy also gave a hint of the future possibilities of the port—the road estimated revenues from the port at \$1,556,000 in the first year and \$2,569,000 by the fifth year. Other traffic estimates, cited by a Chicago Regional Port District officer, indicate potential carloadings of 77,500 by 1962, about 250,000 or more in 10 to 12 years, taking into account port development and accompanying industrial and commercial development expected in the area.

In defense of its position, Rock Island pointed to expenditures since 1954 of about a half million dollars on new yard and trackage facilities in the port area. Rock Island witnesses listed several other



Aluminum Gondola Car on Exhibit in Chicago

One of 24 all-welded, aluminum-body gondola cars being built by Pullman-Standard for Kaiser Aluminum & Chemical Corp. will be exhibited October 22 and 23 on Track 6 of the Chicago & North Western's Chicago terminal. The 24 new gondolas

will be used in Kaiser's bauxite mining operations on Jamaica, supplementing a fleet of 35 such cars now being operated by Kaiser Bauxite Company, a wholly owned subsidiary of Kaiser Aluminum. (Railway Age, June 17, p. 13).

Great Lakes ports with port-access monopoly situations. They denied there is anything "unusual" about the Lake Calumet district which would require service by more than one road.

Downing B. Jenks, Rock Island presi-

dent, said factors as yet undetermined—St. Lawrence Seaway tolls, for example—prevent firm estimates of future port traffic. But, he added, the Rock Island will have facilities and equipment sufficient to meet the demand.

People in the News



John L. Weller
Seatrains



Paul Gross, Jr.
REA

MINNEAPOLIS & ST. LOUIS.—Ray Spooner and W. O. Doyle, general agents, Watertown, S. D., and Albert Lea, Minn., respectively, retired. Vern Hinds, agent, Aberdeen, S. D., named general agent for South Dakota. W. C. Bringleton appointed general agent, Albert Lea area.

MONON.—Jack M. Russell, traveling freight agent, Winston-Salem, N. C., appointed general agent, New Orleans, succeeding E. B. Stanley, Jr., transferred to Tampa, Fla., to replace Charles T. Hill, who retired September 30. James M. Bosstick named freight traffic agent, Birmingham, Ala.

T. Kozubal appointed superintendent—Chicago district, South Hammond, Ind. Position of assistant superintendent—Chicago district abolished.

RAILWAY EXPRESS AGENCY.—Paul Gross, Jr., assistant to president and secretary, New York, appointed vice-president and secretary.

Joseph H. Murray, assistant manager—claim division, New York, retired.

SEATRAN LINES.—John L. Weller elected president and director, succeeding Henry F. McCarthy, resigned. Mr. Weller previously was a vice-president of Trans World Airlines.

TEXAS & NEW ORLEANS.—Effective October 1, the passenger accounting department consolidated with the miscellaneous accounting department. M. M. Sherfy assigned to special duties as assistant to auditor, and W. H. A. Rolffing named assistant auditor, miscellaneous accounting department.

TOLEDO TERMINAL.—O. K. Lawson, superintendent, Hocking Valley district, Chesapeake & Ohio, Columbus, Ohio, appointed general manager, Toledo Terminal, Toledo, Ohio, succeeding the late Clyde F. Meyers (Railway Age, Sept. 23, p. 37).

UNION PACIFIC.—Henry A. Leutenegger appointed general freight agent (divisions) Omaha, Neb.

OBITUARY

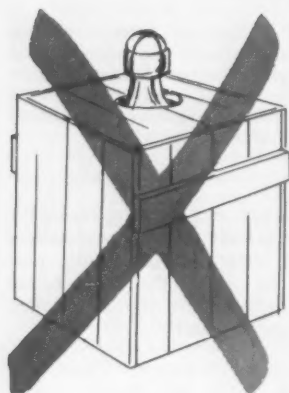
James R. Fullerton, 63, assistant to general purchasing agent, Missouri Pacific, St. Louis, died October 5.

John E. Larson, assistant manager, Western Weighing and Inspection Bureau, was fatally injured in an automobile accident near Urbana, Ill., October 4. Mr. Larson was in charge of the Grain Door Coopering and Reclamation Service of the bureau.

Loren S. Wells, 89, who retired in 1937 as electrical superintendent, Pennsylvania, died October 5 at his home in New York.

Leon Godchaux, 63, freight traffic manager, Illinois Central, died October 11 at Chicago.

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low-cost end results



RAILROAD DIVISION

Facts & Figures at a glance

Dividends Declared

ATCHISON, TOPEKA & SANTA FE.—30¢, quarterly, payable December 9 to holders of record October 25.

ATLANTIC COAST LINE.—5% non-cumulative preferred, \$2.50, semiannual, payable November 11 to holders of record October 25.

CAMDEN & BURLINGTON COUNTY.—75¢, semiannual, payable January 2 to holders of record December 13.

DELAWARE.—\$1, semiannual, payable January 2 to holders of record December 13.

ELMIRA & WILLIAMSPORT.—7% preferred, \$1.65, semiannual, payable January 2 to holders of record December 20.

LAKE SUPERIOR & ISHPEMING.—25¢, quarterly, paid October 15 to holders of record October 1.

NORFOLK & SOUTHERN.—5% stock dividend (subject to approval of ICC), payable December 20 to holders of record December 2.

NORFOLK & WESTERN.—4% adjustment preferred, 25¢, quarterly, payable November 8 to holders of record October 17.

NORTHERN CENTRAL.—\$2, semiannual, payable January 15 to holders of record December 31.

NORTHERN PACIFIC.—50¢, increased, quarterly, payable October 25 to holders of record October 7.

PITTSBURGH, FORT WAYNE & CHICAGO.—common, \$1.75, quarterly; 7% preferred, \$1.75 quarterly, both payable January 2 to holders of record December 10.

READING.—50¢, quarterly, payable November 14 to holders of record October 10.

ROCHESTER & GENESSEE VALLEY.—\$2, semiannual, payable January 2 to holders of record December 20.

WESTERN PACIFIC.—75¢, quarterly, payable November 15 to holders of record November 1.

August Accident Report

The ICC has published its Bureau of Transport Economics & Statistics' preliminary summary of steam railroad accidents for August and this year's first eight months. The compilation follows:

Item	Month Aug. 1957	8 Months ended with Aug. 1957
Number of train accidents*	379	2,821
Number of accidents resulting in casualties	29	250
Number of casualties in train, train-service and nontrain accidents:		
Trespassers:		
Killed	93	507
Injured	69	429
Passengers on trains:		
(a) In train accidents*		
Killed	—	3
Injured	8	171
(b) In train-service accidents		
Killed	1	10
Injured	92	835
Employees on duty:		
Killed	19	121
Injured	1,005	7,051
All other nontrespassers:**		
Killed	121	883
Injured	282	2,701
Total—All classes of persons:		
Killed	234	1,524
Injured	1,456	11,187

*Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of more than \$750 to railroad property in 1957. Only a minor part of the total casualties result in casualties to persons, as noted above.

**Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and nontrespassers, were as follows:

Persons:		
Killed	115	836
Injured	235	2,290

October 21, 1957 RAILWAY AGE

Now DF Comes to Gondolas

The Union Pacific and the Chesapeake & Ohio are having Evans Products Company convert gondolas to DF (damage-free) service. A total of 33 of these cars will soon be in operation with the lading devices which have been used with success in box cars.

The gondola arrangement was jointly developed by National Carbon Company, Division of Union Carbide Corporation, and Evans Products working closely with the two railroads to develop a method for shipment of the large carbon and graphite electric-furnace electrodes manufactured by National Carbon.

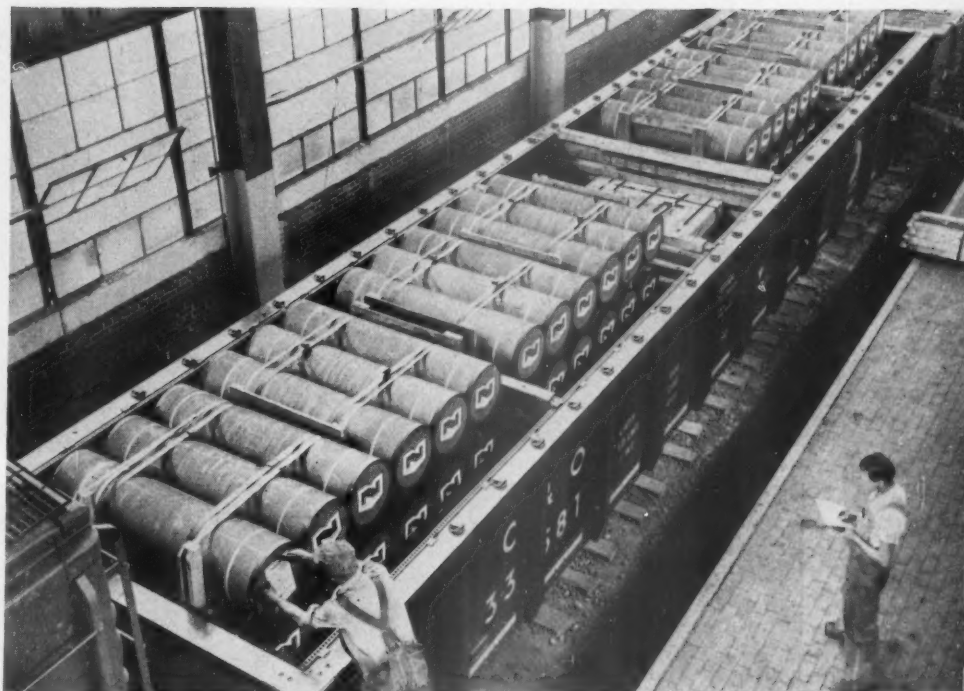
Railroads get more revenue per car-mile and the protective features are reducing damage claims. National Carbon has already predicted that there will be an increasing number of these cars in service, and that the DF gondola will find a place in many industries handling a wide variety of products.

One of the first regular electrode shipments in a DF gondola car contained 27 electrodes each approximately 35 in. in diameter and 110 in. long, with a total weight of 146,000 lb. Previous shipments had to be limited to only 15 of these electrodes per car because of the limited restraint provided by conventional dunnage.

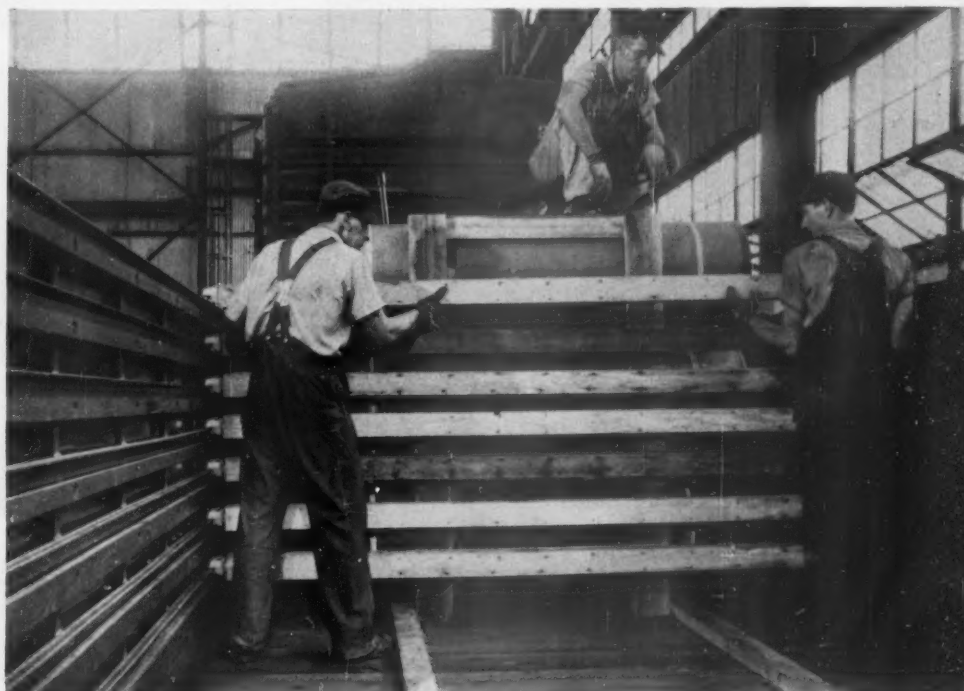
The DF gondolas now in service vary in inside length from 42 to 52½ ft. Each has a heavy wooden floor with drainage holes. The wooden floor permits easy nailing of stringers for positioning the shipping pallets. The ends of the cars have been lined with wood to permit closer bracing and loading. Inside side walls of the cars—all 54 in. high—have been equipped with seven belt rails of ¼-in. angle running the length of the car. The belt rails have the conventional Evans arrangement of holes on 1-in. centers for anchoring the cross members.

Cars are supplied with 45 4- by 5-in. cross members of 9-gage steel reinforced with fir and faced with plywood to prevent gouging of the shipments. The locking devices at the ends of the cross members are fixed at one end and telescope at the other to permit easy installation and removal.

Test shipments early this year confirmed railroad and National Carbon opinions that electrode products are excellent lading with which to experiment in developing the DF gondola. For customers these gondolas almost eliminate conventional dunnage, simplify and speed loading and unloading, cut handling costs, and permit greater payloads in cars.

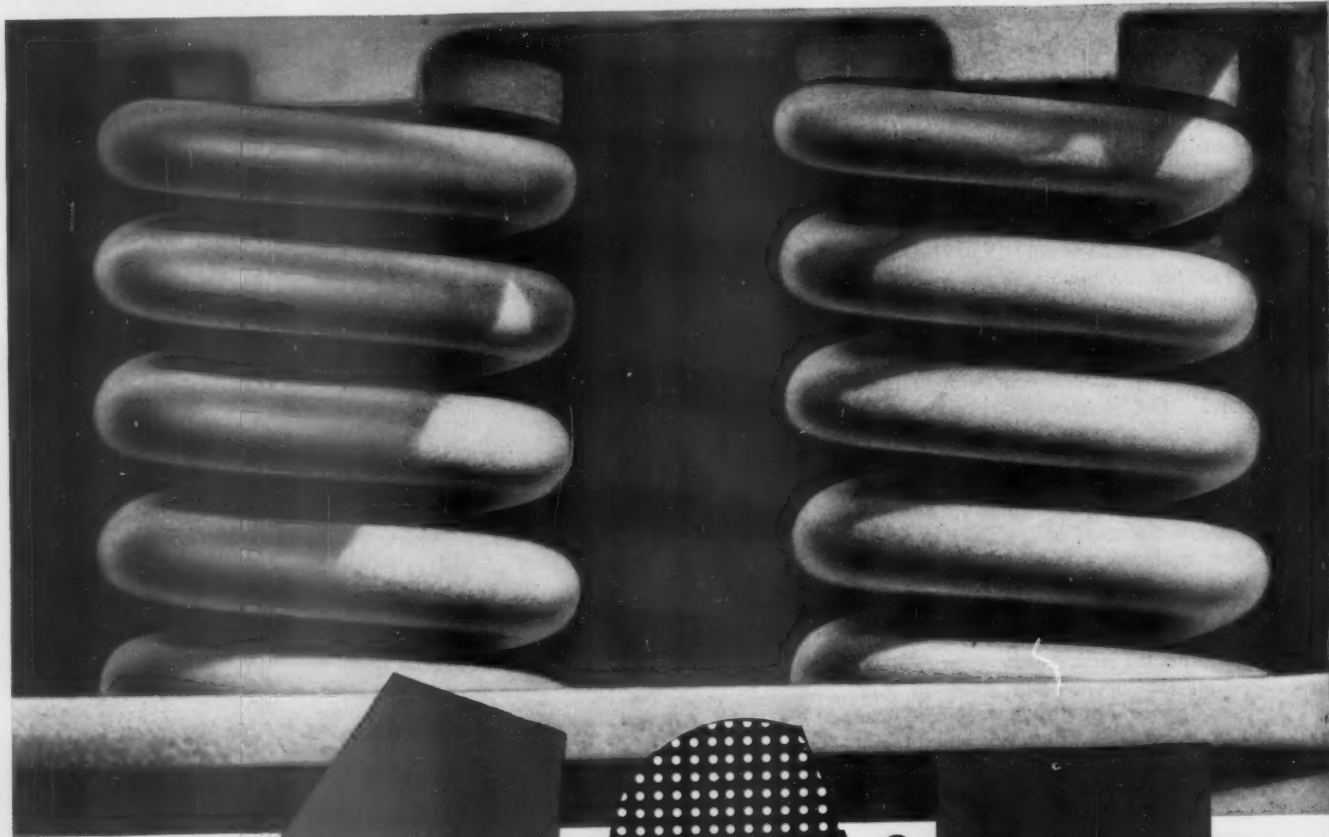


DF GONDOLA CAR loaded with 18-in. electrodes gets shipping notice and final checking before leaving National Carbon plant. Center section of the car contains crates of carbon connecting pins used with the electrodes in electric furnace operation.



RESTRAINING FORCE of 42,000 lb is provided by the row of seven cross members that lock into the belt rails. Cross members are a permanent part of the DF gondola equipment and are strapped together and placed in the car after unloading to be used with the next shipment.

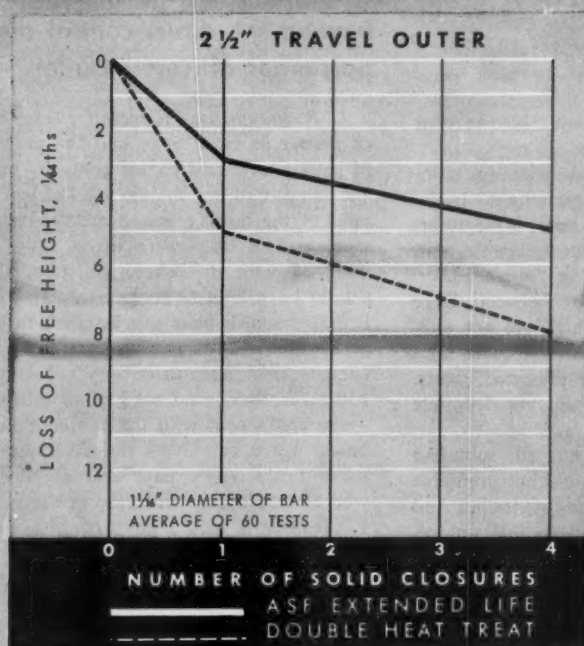
The spring that provides
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SAFE



...longer!



Here is one of the really significant advantages of ASF Extended Life Springs. As shown by the graph, these springs have almost twice the resistance to permanent set—compared with conventionally heat-treated springs.

In many ways this is a more important advantage of Extended Life Springs than greater resistance to breakage. Any car man can quickly detect a broken spring . . . but the *unseen* cause of many a hard-riding car is the spring that is shirking its share of the load.

ASF Extended Life Springs are available at no increase in price. How much will they save on your road? It depends on your own operating conditions . . . but specifying these modern springs will give you an automatically higher return on your spring investment.

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"Passenger Business As a Growth

Here are excerpts from remarks by James G. Lyne, editor of *Railway Age*, at the 94th Annual Meeting of the American Association of Passenger Traffic Officers in Bermuda (aboard S.S. *Queen of Bermuda*), October 7, 1957.

"A lot of people, including some railroad people, seem to believe the only thing to do is kill it all off."

What disturbs me is not so much that the passenger business is seriously ill and needs some high-grade surgery. What really bothers me is that so many people, including some railroad people, are like the rancher whose wife broke her leg—and so (as he explained) he had to shoot her.

Some parts of the passenger business are really bad—so a lot of people, including some railroad people, seem to believe the only thing to do is to kill it off.

A generation or more ago electric light pretty well supplanted gas light. The gas companies withdrew gracefully from the lighting field and turned their attention to other uses of their product. They certainly did not insist on staying in the lighting field where their product was inferior; and they certainly did not close up shop. On the contrary they concentrated their efforts in areas where gas can do a better and more economical job than electricity—and the gas business has prospered.

"Few railroads do not have at least some trains which earn all of their direct expenses."

A number of railroads have had increases so far this year in medium and long-distance coach traffic. On the Burlington, Julius Alms advised me that revenue passengers carried increased 6 per cent in 1956 and revenue was up 5 per cent. In the first eight months of 1957 the Burlington's passenger revenue is up $4\frac{1}{4}$ per cent over last year. This road's "Denver Zephyr" had an increase of 27 per cent in Chicago-Denver passengers in the first six months of this year, compared to 1956.

I have reports from a number of Western and Southern roads, indicating that at least some of the services of some of the roads are holding up very well. Wabash passenger earnings are really climbing—up $8\frac{1}{4}$ per cent in the first eight months of 1957, and in the same months

of 1956 earnings were up $5\frac{1}{4}$ per cent over those of 1955.

There are few railroads with any considerable volume of passenger traffic which do not have at least some trains which earn all of their direct expenses and make some contribution to "overhead."

There are some trains between large centers of population which are not only paying all direct costs, but are more than covering so-called "fully allocated" costs. In other words, these trains are definitely profitable.

In some places, but not all, suburban service—while it is certainly not profitable—is nevertheless increasing its traffic. And the largest cities must have this service, under penalty of great losses in property values. Since they need the service, they must help make it pay.

"A business, to be a real business and not a philanthropic enterprise, has to be concerned with earning a profit."

The evidence passenger officers have given me shows that there are at least six kinds of passenger service where actual or potential growth exists as follows:

1. Coach traffic between centers of population upwards of 200 miles apart (or less distance, if traffic volume is sufficient to support frequent service).

2. Sleeping car service for overnight runs between large population centers.

3. Limited first-class service for long distances where scenery is a factor.

4. Excursions and tour traffic.

5. Commuter service around large cities.

6. Much of the "head-end" traffic.

One of the most heartening of recent developments is the interest the railway equipment and supply industry is taking in launching a research project into the passenger traffic situation under the

auspices of their association, the Railway Progress Institute.

But a business, to be a real business and not a philanthropic enterprise, has to be concerned not just with volume and with growth, but with earning a profit.

When it comes to controlling costs, a large part of the necessary authority lies outside the scope of most passenger departments. But passenger departments, if they do not have full authority to correct such conditions, nevertheless can assemble the pertinent facts—and press the case upon those departments which are in a position to act.

Areas of serious cost trouble beyond the direct control of passenger officers include:

1. *Requirement of excessive numbers of people in train crews and the practice of paying train and engine crews by mileage instead of by the hour.* Leaders of most of the railway unions are reasonable men, and if they were made fully acquainted with the whole situation, they should be willing to cooperate. The fact is that unionists have just as much to lose as the railroads if present conditions are uncorrected. With their "day" of 100 or 150 miles, they—and not just the railroads—are confronted with the competition of buses, where employees run 200 miles or more for a day's pay; and of airlines where employees traverse upwards of 1,000 miles to earn a day's compensation.

2. *The requirement to operate trains that passenger officers, as business men, would like to discontinue.* Some of these trains are operated because public service commissions insist upon it. The deficits from such operation should be segregated in a special account under some such label as "political trains." If some poorly patronized sleeping cars are operated because important shippers want this service as a stand-by, the charge should not be laid upon the passenger department. Perhaps it is, rather, a freight traffic sales expense; or chargeable to public relations.

3. *Inadequate revenues in handling head-end traffic* (with efficiency often less than par) and in the movement of commuters.

Business"

"Separate the sheep from the goats."

The passenger departments cannot correct these burdensome cost factors by themselves—but they can, at least, compile and make known figures to show how much of their "red ink" is attributable to causes beyond the control of the passenger department.

One major duty that does lie with the passenger department is that of separating the good from the bad about the passenger business. It is the department's big job to distinguish the sheep from the goats, the wheat from the chaff, the potential profit-makers from the hopeless losers. And to convince management that the separation is valid—hence inducing

management to support the healthy part of the service with good equipment, skilful pricing, and effective sales effort.

To solve the problem of getting the weeds out of the passenger garden, you will have to have a lot better cost information than is provided for most of you now. Too many cost figures are system-wide averages which do not accurately reflect the actual expense of any particular service. Neither passenger departments nor top management can make wise or realistic decisions regarding the profit or loss of particular trains or particular services with the kind of figures available from the ICC or provided on most railroads.

"The railroads are by nature a mass production industry."

There is, in my opinion, a basic principle at work on the railroads—not only in passenger service but in all railroad services. The railroads will thrive as they accommodate themselves to this principle. The principle I am thinking of may be stated as follows: The railroads are by nature a mass production industry—an industry that derives its strength from getting more and more units of production per hour of human labor. Hence, any part of railroading which is getting increased

output per hour of labor is on the right track—but any part of the business is headed for trouble wherever production per hour of labor is stationary or declining.

It is this situation that appears to be favoring the coach business over first class. When you consider the number of porters, waiters and other labor whose greatly increased wages have to be spread over relatively few first-class passengers, it is no wonder that this service is in trouble.

"Advertising on an 'in and out' basis is money wasted."

Passenger service is a product being sold to consumers—where constant merchandising and advertising is essential. Advertising on an "in and out" basis is, usually, money wasted. How long would any popular cigaret or drink stay popular if it were not consistently advertised?

And how long would any of these popular consumer goods stay in business if their manufacturers allowed the quality of their products to deteriorate? Good equipment, reasonably fast speeds, courteous employees are essential.

And how long would a popular cigaret stay popular if its price were raised 2¢ a pack—not because the cigaret wasn't profitable at existing prices, but to enable the manufacturer to make up the deficit

suffered in his chewing tobacco department? If the cigaret were priced right in the first place, any attempt to increase its price in order to make up deficits in some other product is bound to reduce earnings, not raise them. Doesn't this same principle apply on the railroads?

Finally, we can never sufficiently emphasize the fact that, in the railroad business, the railroads sink or swim together. Railroad men know one railroad from another but a large part of the traveling public doesn't. One bad apple spoils the whole barrel as far as the industry's reputation is concerned. This doesn't mean that service and rates have to be uniform—but it certainly does mean that railroads should cooperate.

"Let's get out of the little corner grocery knick-knack trade and go supermarket in a big way."

A lot of you gentlemen have advised and helped me in preparing these remarks—and I know that when I quote one of

you, whom I shall not name, I pass along the opinion of most of you. Here is the quotation:



"Good equipment is important to passenger traffic growth."

**STUDENTS
EDUCATIONAL TOUR
OF
MADISON AND
CAVE OF THE MOUNDS**
One Day — All Expense — Low Cost
Chicago & North Western Railway

"Constant merchandising and advertising are essential."

"A properly planned and marketed railroad passenger service can attract and hold passengers and revenue."

Passenger officers do not have the authority to force the acceptance of that opinion by the railroad industry. But it will help if they will analyze the facts, and honestly and ably interpret them.

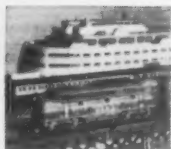
They should be able to convince the industry's leadership that it shouldn't shoot the old gal just because she has a busted leg. Instead they should expect their colleagues will give her the proper medical treatment—and that she will soon be as spry as ever she was. Maybe even more so.

Let's get out of the little corner grocery knick-knack trade and make our plans to go "supermarket" in a big way. Let's cut down the number of our retail outlets the way the chain stores have done.

Railroading is a business. It isn't foreign aid or social security or farm relief. The railroads are in business to make an honest dollar—just like every other reputable concern that is in business. If we will conceive of passenger business as a business and talk of it loud and long and repeatedly as a business, before long Americans are bound to get the point and let it be run as a business.

Lubrication case study—

STANDARD HD Oil's ten years' service on the GM & O



This is a case story about the performance of STANDARD HD Oil in eight power units on the Gulf Mobile & Ohio over the last ten years. These eight EMD units pull "hot shot" passenger trains, including the famed "Abraham Lincoln" and the "Ann Rutledge," between Chicago and St. Louis. The units roll up 18,000 to 20,000 miles per month. They travel the 285 miles of the route in less than five and a half hours, including station stops.

Recently one of these units was rebuilt and converted to a higher horsepower rating. It had operated over 500,000 miles without mechanical failure *and without crankcase drain*. Inspection revealed that moving parts were free and in excellent working condition. Little or no wear was observed, and minimum deposits were found. Parts were reinstalled and the unit was returned to service. This is a real tribute to GM&O maintenance and to STANDARD HD Oil.

STANDARD HD Oil can deliver this kind of service for you. Find out how. Write or call Railway Sales Department, Standard Oil Company, 910 South Michigan Avenue, Chicago 80, Illinois.

STANDARD OIL COMPANY
(Indiana)



Santa Fe Goes for Microwave

Microwave has been installed to provide communications to the end of a new branch line to Cushenbury, Cal. To obtain the details about this installation, as well as the reasoning behind this road's confidence in microwave, a Railway Age editor interviewed J. A. Parkinson, general superintendent of communications and signals of the Santa Fe.

Q. Mr. Parkinson, where is your new microwave system located?

A. One terminal station is at San Bernardino, about 60 miles east of Los Angeles. From here, the microwave is beamed 9 miles north to a repeater station at Crestline, which is on top of a mountain about 9 miles east of our main line. The main line runs northwest from San Bernardino up through Cajon Pass, where it curves slightly northeast and then veers north to Victorville. This point is our second repeater station, 20.5 microwave miles north of Crestline. The microwave is beamed southeast from Victorville to the end of the new branch in the Lucerne Valley district at Cushenbury, 26.5 miles.

Q. Where does the branch connect with the main line?

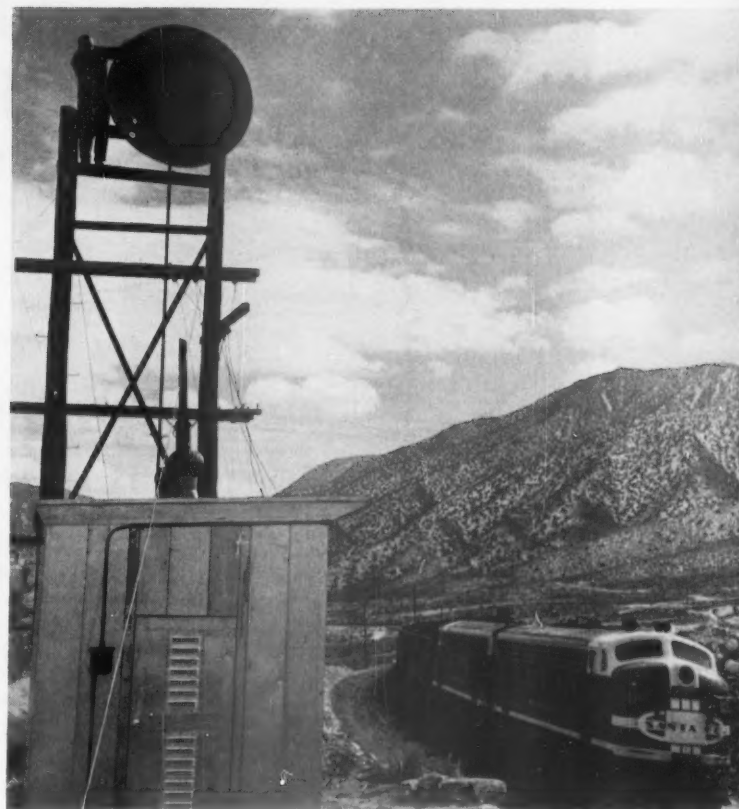
A. At Hesperia; but if you're wondering why we put a microwave station at Victorville, that office is open continuously.

Q. Why did you decide to install microwave for this branch line's communications?

A. For the money we had to spend, it did the best job for us.

Q. How did you arrive at this conclusion?

A. Our primary concern was to provide a message circuit for the agency at Cushenbury so that he could notify San Bernardino when loads were ready to be hauled out, and when he needed more empties. The branch runs to a Kaiser Steel Company limestone quarry and cement plant, at Cushenbury, and we haul the limestone and cement down to the main line at Hesperia, then to their Fontana steel plant (other destina-



MICROWAVE TERMINAL at Cushenbury is about a mile from the depot at the end of the new branch line.

tions, as far as the cement is concerned). This was a newly constructed branch with no communications.

Q. I suppose there were drawbacks to building a pole line?

A. Yes, for one thing, the branch runs parallel to the eastern slope of the San Bernardino mountains along a 4,000-ft contour in the Lucerne Valley. Much of this terrain is rocky, so we would not have an easy time digging pole holes. Another drawback is that our main-line message circuit is quite busy now, and this would be adding to its crowded condition. And finally, if we needed to expand our communications for this branch, we would have to add carrier, transpose the line or add another wire pair.

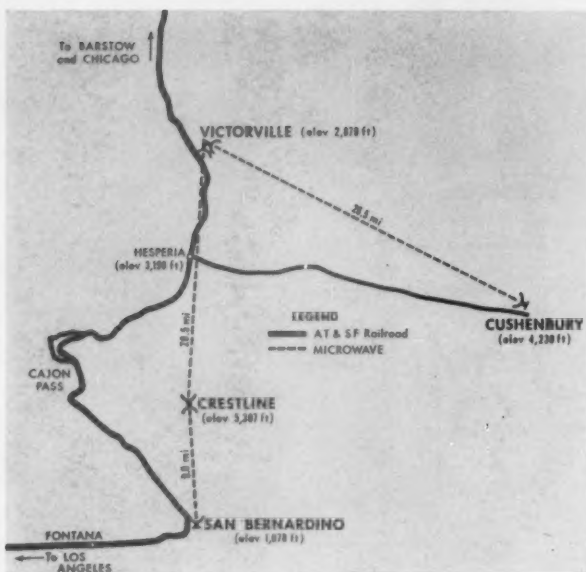
Q. So a pole line did not appear to be the best solution to your problem?

A. That's right. Our next logical thought was maybe we can do as well or better with some other type of communications. And, of course, our first thought then was to consider microwave.

Q. How does microwave stack up costwise?

A. Very favorably. In fact, we felt that we could do more than provide just a message circuit to the main line, if we went to microwave, and still not spend more than the cost of the pole line. By using microwave, we found we could bring the Cushenbury circuit out to Victorville, and then on into San Bernardino. We needed a repeater in the Victorville-San Bernardino hop, but that is only a minor technicality.

MORE ►



MICROWAVE GOES via Victorville (open office 24 hr) to provide a future link in a Los Angeles-Barstow system.

Q. What's the advantage of having Cushenbury talk to San Bernardino?

A. San Bernardino is a division point, and that's where the billing for the limestone is handled. Also that's where the dispatcher is located who handles the Cushenbury branch.

Q. To provide a message circuit to Cushenbury, could you not have "shot" straight "cross lots" from San Bernardino to the end of the branch, rather than going via Victorville?

A. Yes, but it would not have given us the communications facilities we got via Victorville. Also, a direct San Bernardino-Cushenbury system would not have solved the problem of communication with trains along the branch. A third factor, looking toward the future, is that by going via Victorville, we obtain a link which could, in the future, be used in a Chicago-Los Angeles main-line microwave system.

Q. Then this microwave will give you a link in a main-line system, as well as communications to Cushenbury?

A. Yes, and we'll get much more.

Q. Just to digress a bit. How big is this main-line link, and where do you go from here?

A. This system will give us San Bernardino to Victorville, 45 miles. We have made surveys for paths and station sites for microwave from Victorville to Barstow, 37 miles, and also from San Bernardino to Los Angeles, 59 miles. These are railroad distances, with the exception of San Bernardino-Victorville. At this stage of our planning, it looks as though we can get to Barstow with one repeater and the same for Los Angeles, although I wouldn't be surprised if we needed two for that hop.

Additional Circuits

Q. To get back to Cushenbury. What other communications circuits could you provide in addition to the message circuits?

A. We realized that we should provide communications to trains operating on the branch. As we have VHF radio on our locomotives and cabooses, it seemed logical to have base radio stations at each end of the branch to give us radio coverage. If we established base stations, we would like to have them

remotely controlled from San Bernardino. Thus we would need a radio control circuit to Victorville and on to Cushenbury.

Q. Did you provide any additional voice circuits other than the one message circuit?

A. Yes, and we did better than put in a message circuit. As long as we were not going to connect into our pole line at Victorville, we decided to give the Cushenbury agent a dial extension off our PBX board at San Bernardino. In addition, we decided to give the Victorville agent a dial extension off the same PBX board. So by installing microwave, these two offices obtained better communications than if we had built a pole line.

Q. Any other circuits?

A. No. To sum up, in the microwave system, we have two circuits to Victorville from San Bernardino, and two circuits from San Bernardino to Cushenbury, as follows: San Bernardino to Victorville—one voice circuit and one radio control circuit; San Bernardino to Cushenbury—one voice circuit and one radio control circuit.

To digress a bit, I might say that the microwave equipment we've installed is capable of expansion to 120 voice channels, which gives us plenty of room for future expansion between San Bernardino and Victorville.

What Was Installed

Q. What equipment did you install at San Bernardino and where is it located?

A. The terminal equipment is in the depot and the antenna is mounted in the roof. The depot has an elevation of 1,078 ft and the antenna is 41 ft above ground.

Q. Do you have standby power equipment?

A. No. The commercial power at San Bernardino has been very reliable, and we have an electronic maintainer here who can be quickly called if the equipment fails.

Q. Is your Crestline station a straight repeater; that is, no drop-outs?

A. Yes. Here the ground is 5,307 ft above sea level, and our antennas are on a self-supporting tower 32 ft high. We had to use a self-supporting tower, because we would have to guy a wood pole or H-frame. It was not possible to use guys, because we could not cut any trees or branches that would be in the way. Our station is in a national forest. From the standpoint of a fire hazard, it was better that we use a steel tower. Our equipment is in a fireproof concrete block building.

Q. What was the reason you could not cut any branches or trees at this station site?

A. Our station is in the San Bernardino National Forest which necessitated that we do not cut any trees, and also that our tower and housing be of fireproof construction. This building, incidentally, is large enough to house additional repeater equipment if we use Crestline for a microwave station in a suggested future main-line system from Los Angeles to Barstow.

Q. What did you install at Victorville?

A. Our station here is on a hill back of the depot where we have an elevation of 2,879 ft and our antenna is 28 ft above ground. Here we used a little native ingenuity in our antenna supports. We erected two 35 ft wood poles and an 80 ft wood pole at the corners of a triangle. Two microwave antennas, one facing toward Crestline and the other toward Cushenbury, are mounted on cross-supports between the poles. A VHF radio antenna is mounted on a 10-ft pipe mast atop the 80-ft pole. These poles are guyed three ways. The microwave and base station radio equipment are in steel house.

(Continued on page 25)

WHAT RAILROADS ASKED FOR...

Sperry 25-pound single-pack radio... designed exclusively for railroads

Sperry Single-Pack Radio has been designed *specifically* for railroad communications. Railroads listed the features and performance characteristics they wanted and Sperry engineers incorporated them to make the Single-Pack—years ahead of any other railroad radio system yet developed.

Only Sperry Single-Pack Radio offers all these features:

One compact case 17 $\frac{3}{16}$ " long, 12 $\frac{3}{16}$ " wide, 7 $\frac{1}{8}$ " deep with shock mount, 6" deep without shock mount

Four-channel communication

Transistorized circuits

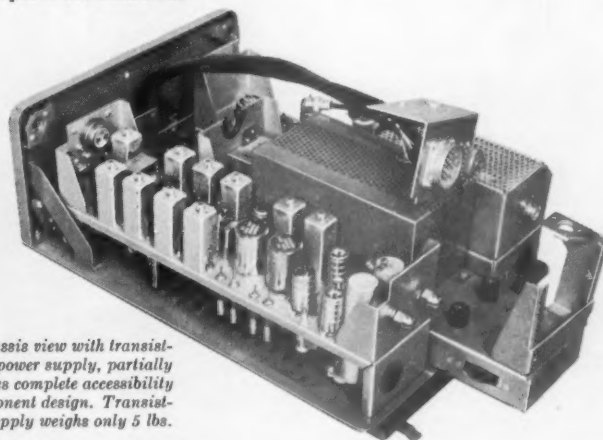
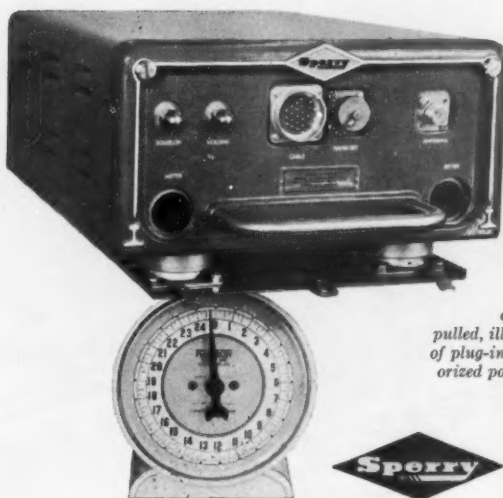
Transistorized power supplies

Front-panel metering for simpler testing

Plug-in units for easy maintenance

Split-channel design and temperature-controlled crystal ovens

Sperry Single-Pack Radio conforms to all AAR specifications... is the complete answer to the special needs of railroad communication. Available soon and at a practical, competitive price. Its development is yet another great achievement in Sperry Rail Service's 30-year tradition of serving railroads exclusively. Write for complete information.



Chassis view with transistorized power supply, partially pulled, illustrates complete accessibility of plug-in component design. Transistorized power supply weighs only 5 lbs.



SPERRY RAIL SERVICE

SUPPLYING RAILROADS EXCLUSIVELY

Division of Sperry Products, Inc. • Danbury, Connecticut

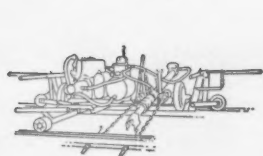
You can beat the high cost of tie renewal with...



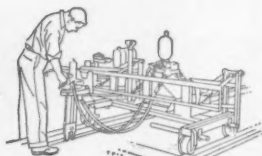
Fairmont

THE FAIRMONT W90 SERIES A TIE HANDLER (shown at left) saves time . . . money . . . and manpower on any tie renewal job! If replacements are made with the track raised, the W90 is equipped with a boom . . . the tie is quickly removed and a new one is easily inserted. It is also an efficient tie inserter when the track is not raised. The W90 is self-propelled . . . requires only two men for operation . . . can be readily removed from track at point of operation. Speed up your tie renewal program and keep your cost accountants happy with Fairmont Tie Renewal equipment—write or call today!

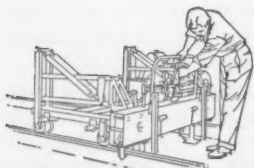
Other Tie Renewal Equipment by Fairmont



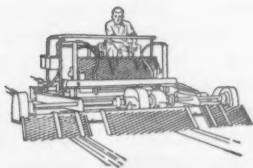
W68 SERIES A HYDRAULIC TIE REMOVER removes ties at an average rate of approximately one per minute. Ruggedly built with a minimum of moving parts. Requires only two-man operation.



W84 SERIES B HYDRAULIC SPIKE PULLER is primarily for use in tie gangs. Light in weight, it features a ball-and-socket-mounted pull assembly. Will pull from either rail without change-over.



W86 SERIES A HYDRAULIC RAIL LIFTER features a spring-counter-balanced lifting arm, welded steel supporting frame and a direct-driven hydraulic pump. Two-man track removal.



W87 SERIES B TIE BED SCARIFIER with one operation can dig a tie bed a minute, to a controlled depth at right angles to rails. Assembly and drive are hydraulically operated.

W83 SERIES B TIE NIPPER (not illustrated) features a simple linkage and lever which guarantee positive opening and closing of hooks. The handle can be placed in three different positions.

FAIRMONT RAILWAY MOTORS, INCORPORATED FAIRMONT, MINNESOTA

MANUFACTURERS OF BALLAST MAINTENANCE CARS, DERRICK CARS, OIL SPRAY CARS, GROUTING OUTFITS, TIE RENEWAL EQUIPMENT, RAIL RENEWAL EQUIPMENT, WEED CONTROL EQUIPMENT, HY-RAIL CARS, TRACK MOTOR CARS, PUSH CARS AND TRAILERS.

(Continued from page 22)

Q. How far is the Cushenbury station from Victorville?

A. It's 26.5 miles. The Cushenbury microwave terminal is about a mile from the depot. We had to do this to gain some elevation in order to shoot out of a draw toward Victorville. The Cushenbury station is 4,230 ft above sea level, and the antenna, mounted on an H-frame, is 28 ft above ground. We had to build about a mile of pole line to carry the power line to the station, and the radio control and PBX extension circuits to the depot.

We have no radio base station here, because we get good coverage all along the branch from the Victorville base station. But we brought the control circuit through in case we should establish a base station here.

Kansas City-Topeka Next

Q. Mr. Parkinson, what other plans have you for microwave?

A. We are engineering an installation between Kansas City and Topeka, about 60 miles. We can probably make it with two repeaters. In Kansas City, we're down in the Kaw River valley, and have two choices to get around a bluff west of our offices. One is to beam north across the valley and then swing west.

Our other choice is to get up on a hill behind our offices, and then we can shoot straight west.

Q. Which way will you go?

A. Probably the first choice, because the second has two big disadvantages. If we went south up on the hill, we'd have to put in cable, for about a mile. Or we could put a repeater on this hill, but that would mean an extra repeater for only a short hop, which would be too expensive.

Q. So you will shoot across the valley for your first hop?

A. Yes, we will get about 10 miles by going this way. From here on the terrain is pretty flat.

Q. Maps are probably your first start-off point. Are there other things that help?

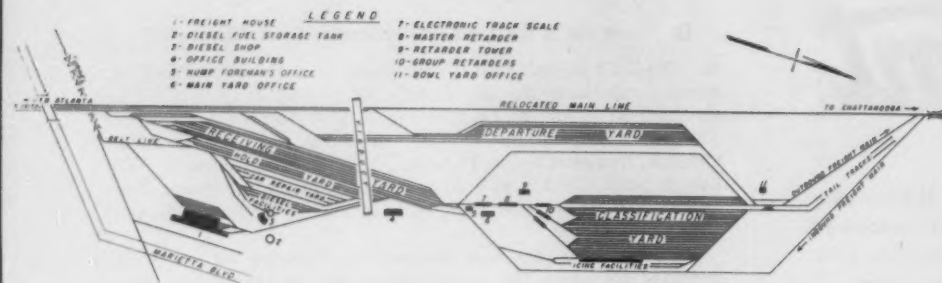
A. Yes, aerial photographs are good. Stereoptic views are also good. A camera with infrared film can be useful in getting photographs of the areas you want. Stand on your high points and "shoot" in the direction you want to beam microwave. As I've said, we look at microwave as an optical system. If you can flash mirrors between your points, you are apt to get good transmission between these points.

Q. What do you consider when selecting a microwave station site?

A. Three factors in selecting a site are: elevation, power and access. I would say that elevation is more important than power, and access is probably the most important. We feel that we have to be able to get there (without an airplane or helicopter), and it certainly is desirable to have commercial power available.

Q. As a strong proponent of microwave, as evidenced by two systems now in service and a third one under way, as well as plans for microwave from Chicago to Los Angeles, what further comments would you care to make concerning the future of this communications medium?

A. Microwave is the logical answer for the communications of the future. Microwave provides high-capacity, multi-channel, weatherproof communications. And it is economical where the need for multichannel communications exists.



Gouged out of rough Georgia terrain, the L&N's Hills Park yard widens the Atlanta gateway. Car handling in this fully automated layout is smoother, faster. It's geared for speed and roomy enough for all the volume of the merged L&N-NC&StL lines. With space reserved for 16 more class tracks, the industry's . . .



Newest Yard Is Built to Grow with

Dedication of the Louisville & Nashville's new Hills Park yard October 4 emphasized the importance of the Atlanta gateway in the newly merged L&N-Nashville, Chattanooga & St. Louis system.

The facility, planned originally as a joint L&N-NC&StL yard, has the capacity to move 2,000 cars a day through its up-to-the-minute classification system. It has a built-in capacity to step up this volume with space provided for 16 additional classification tracks—room enough to handle any foreseeable traffic growth, even that which would come from the possible shift of the Atlantic Coast Line's Atlanta classification operations to Hills Park.

Freight trains up to 150 cars long can be accommodated in the receiving and departure yards. They have respective capacities of 805 cars on seven tracks and 584 on nine. The L&N figures that no one car will be detained in the yard more than eight hours before it's sped on its way. Yard classification capacity has been increased approximately 90% on a daily basis.

In a job that started in January 1956, and cost about \$9.5 million, construction forces literally chopped down a hillside in a cut 114 feet deep at one point, poured fill into a depression that ran to a depth of as much as 102 feet. Four million yards of earth were moved in changing over the old facility to a completely modern, fully automated retarder yard.

Its layout is designed to make full use of main line trackage running free and clear to tie in with the lines to Chattanooga (the old NC&StL) and to Knoxville (L&N).

Telegraph and Teletype consist reports precede L&N traffic into the yard while a closed-circuit television system has been installed for checking car numbers on incoming trains from connecting lines. The TV camera is at the south entrance of the yard with the viewer at the yard office. Visual checks against telegraph or Teletype consist lists are made as trains pass the yard office; Soundsciber tape recordings are made in rush traffic periods for subsequent reference. "Outside" forces

have been cut to the use of a single man to check reefer vents and to keep count of the number of cars on the hold track.

J. N. Neal, superintendent at Atlanta, looks forward to "parting with some headaches" with the yard in full operation. Its automated features will "very materially" reduce the problems of working traffic through the gateway, he says. The biggest benefit won't be in the time trimmed in classification operations, either, he feels, but in time saved at other points on the line as the result of better classification at Hills Park.

Mr. Neal is most enthusiastic about the added capacity at the yard ("we've been badly cramped here up to now"), about the additional safety factors automation provides, and about the anticipated reduction in damage to cars and lading.

Flat switching, a bugaboo for any yardmaster because of seemingly inevitable derailments and rough handling, is eliminated with the electronically controlled gravity hump. A Union Switch & Signal "Velac" installation measures the rolling



Traffic

characteristics of each car humped and automatically controls retarders to hold coupling speed to 2 to 4 mph. Car weights are obtained as cars roll over a 105-foot long Cox & Stevens electronic scale.

Engineers worked out a varied pitch incline for the hump, the slope starting as a 3% grade, increasing to 3.38% about half-way down, easing to 0.7% and then to 0.12% at the base. This finally levels off and toward the end of the class tracks is slightly upgrade to halt cars rolling free.

Switching is regulated by means of a switch list punched into a paper tape which feeds through a telegraph printing transceiver. This initiates control of the automatic switching system.

"Modified football field" lighting—pole-mounted mercury vapor lamps every 125 feet supplemented by tubular tower floodlights in the class yard—gives brightness of 4 foot-candles at ground level.

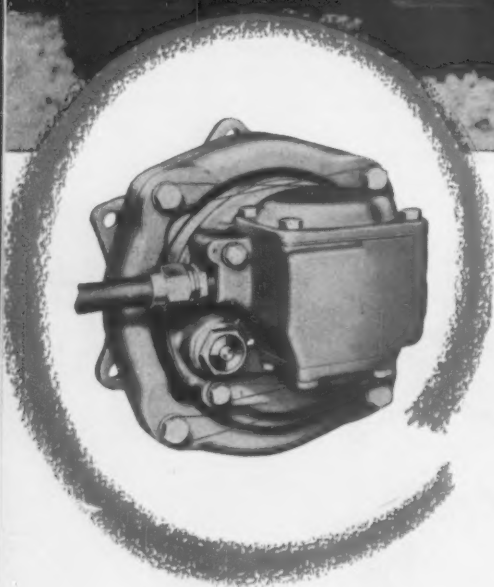
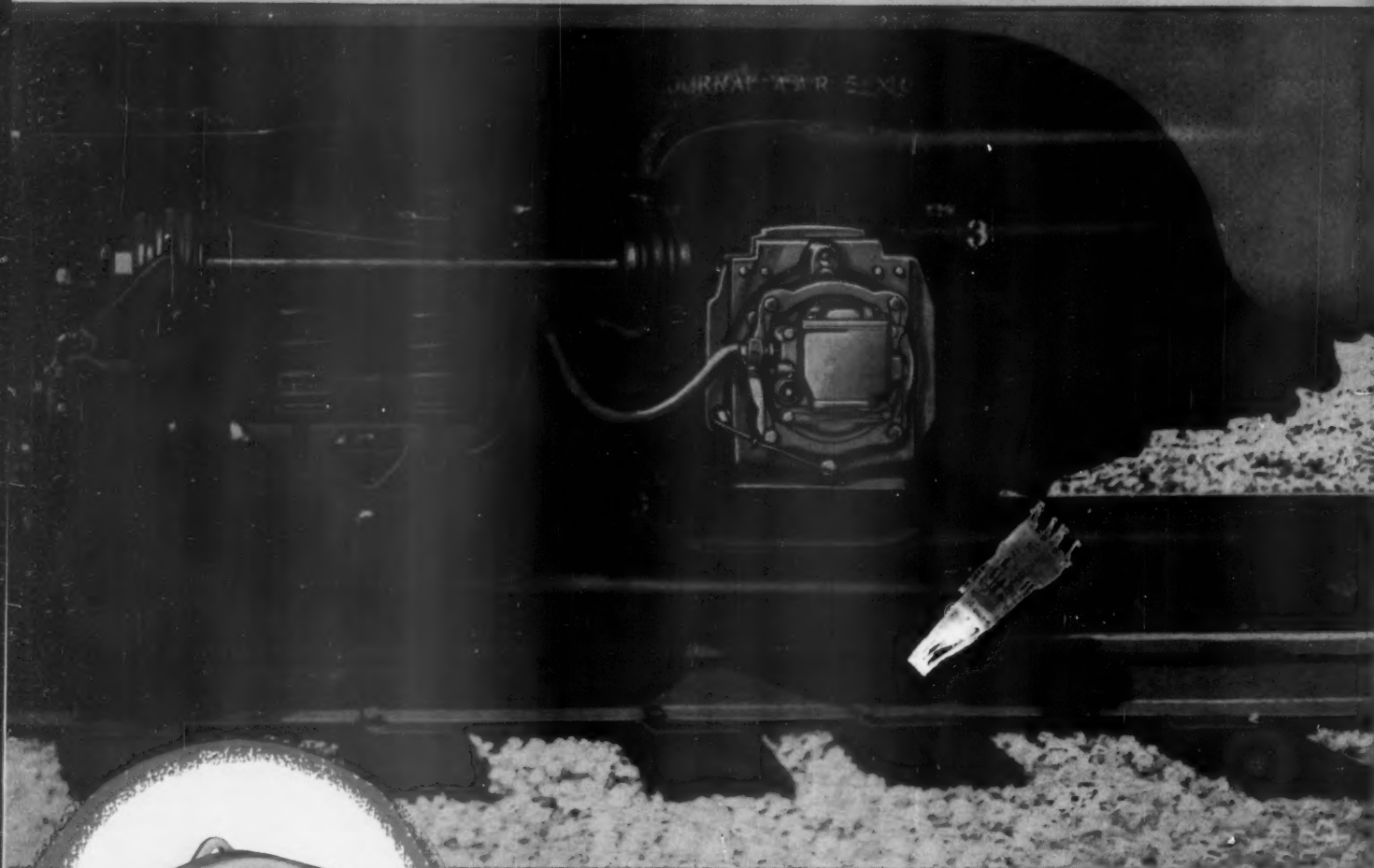
"Tailor-made" communications systems are installed throughout the yard. A P-A-X telephone network connects all
(Continued on page 29)

SHAPING UP during construction, Hills Park involved a tremendous earthmoving and grading effort. Sheer drop of hill in right foreground shows the depth of the cut. Room to grow is seen beyond yard office and retarder tower between classification tracks at right and departure yard area at left. Freight is shown on relocated main skirting yard. New icing facilities for 20 cars are at right in background.



DEPARTURE YARD tracks angling in from the right merge with tail tracks at this point in deep bowl. Picture was taken while construction was still going on and shows wide cut away in background.

What's the difference between a *SLIP* and a *SLIDE*?

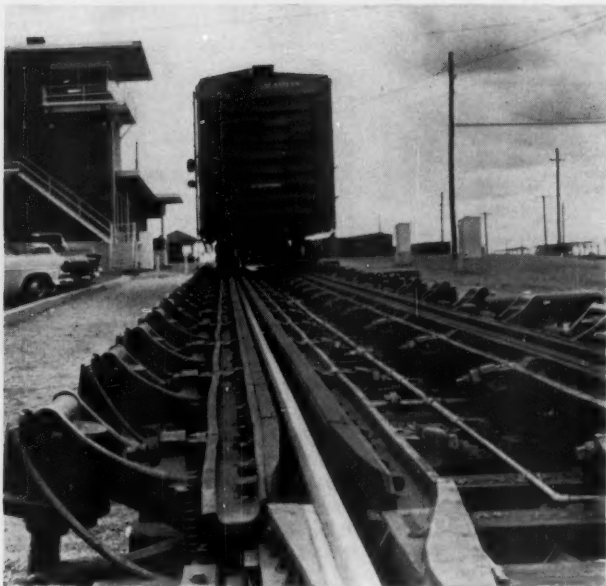


THE DIFFERENCE can easily mean a car out of service and a costly wheel-turning job.

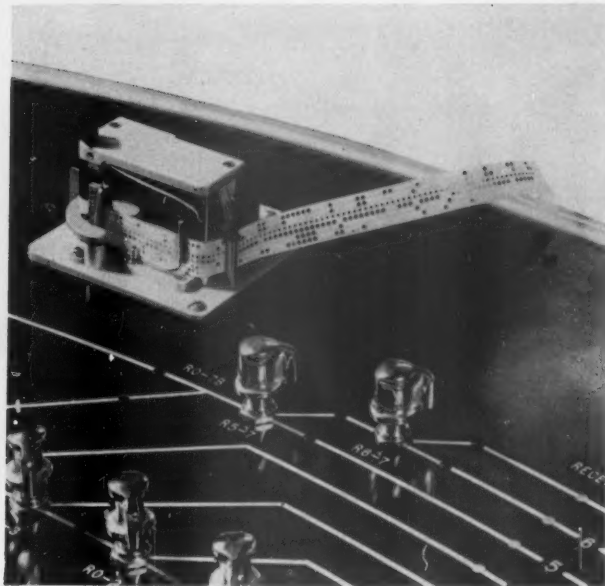
The Westinghouse AP Decelostat® Controller relieves braking pressure the instant wheel slip *starts*—the slip is arrested *before it can develop into a slide* . . . and you save the delays and the cost which would otherwise result.

**Westinghouse Air Brake
COMPANY**

AIR BRAKE DIVISION **XX** WILMERDING, PENNA.



OVER THE HUMP one of the first box cars classified in the new automatic setup rolls past the main yard office controlled by retarders in foreground.



TAPE CONTROL of classification is provided through this tape reader. It translates switch data into instructions for lining up the classification routes.

(Continued from page 27)

offices, printing telegraph equipment receives and transmits consist and other data, and three separate channels of two-way radio have been provided. Radio contact is set up between hump foreman and hump engines (which also are equipped

with cab signals), between yardmaster and yard engines, and between bowl yardmaster and class and departure yard locomotives.

"Intercom" and paging systems provide two-way direct-call communication among yardmasters, hump foreman, switch fore-

man, yard crews and retarder towerman and signal maintainer. A pneumatic tube system is also installed for sending waybills and other papers.

A new icing platform to accommodate 20 cars simultaneously has been constructed.

Million Dollar Freighthouse—Frosting on the Cake

Closely related to the big yard conversion project at Atlanta is a new freighthouse which went into service this summer. It replaced an old, inadequate structure leased from the Seaboard Air Line in downtown Atlanta after the NC&StL's old freighthouse burned several years ago.

Freight loading docks run 500 ft from a new freight office built to expedite paper work. Sixty cars can be accommodated at the platforms, 10 each on six tracks. Three of the tracks lie under a 500-ft long corrugated roof.

The whole installation cost about \$1 million. It is constructed on a plot of land obtained in a series of parcel acquisitions made by the NC&StL for industrial development purposes—a program which is rapidly bearing fruit in the Atlanta vicinity (and elsewhere).

Switching from either end of the freighthouse has been made possible through connection with the Atlanta yard and with the main line. A team track parallels loading tracks for temporary car storage and other purposes. A special loading platform for extremely heavy lading has been built up at the end of the freighthouse away from the freight office.

About 45 cars a day can be worked in the new setup. Work is facilitated by 21 door-loading platforms for easy transfer of freight

to and from trucks which swing up to the docks on a roomy, hard-top apron.

Temporarily "shelved" is an idea for use of a conveyor belt mechanism to move freight about the docks mechanically. Channels for the towing apparatus were provided in the original construction, but these were subsequently filled in with gravel and then topped off with a steel plate and a thin layer of concrete which can be broken up for installation

of the device when the volume warrants.

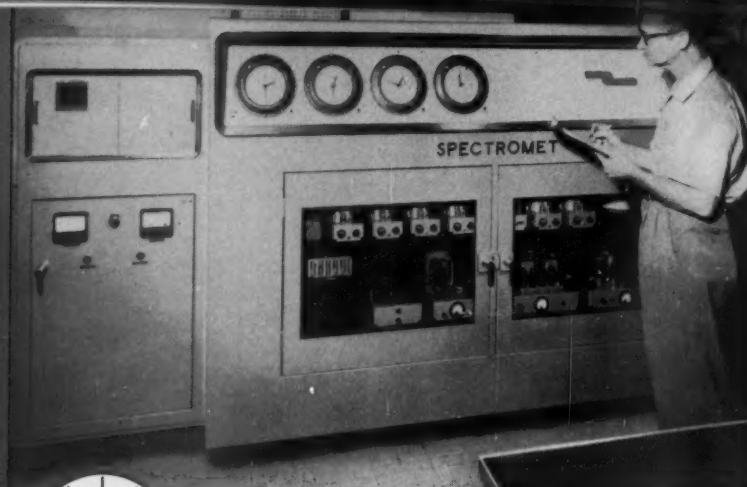
Booths have been constructed for checkers who work with stevedores via talk-back speakers. In addition, there's a pneumatic tube system installed for transfer of bills of lading and waybills between loading docks and the freight office, while a telephone dialing system has been installed to permit all Louisville & Nashville offices in the Atlanta area to communicate directly.



BIG ROOMY FREIGHTHOUSE lies just off a broad highway for easy truck access. Overweight lading is handled on reinforced platform at right.



9:00 a.m. Charge! With an air-splitting roar the electric furnace swallows the rigidly selected steel scrap, and the electrodes take their bite. In order to obtain Southern wheel's unique carbon steel, with its precise blend of alloying elements, the charging mixture must be an exact balance of selected and weighed materials. Now the strict timetable of quality control begins . . .

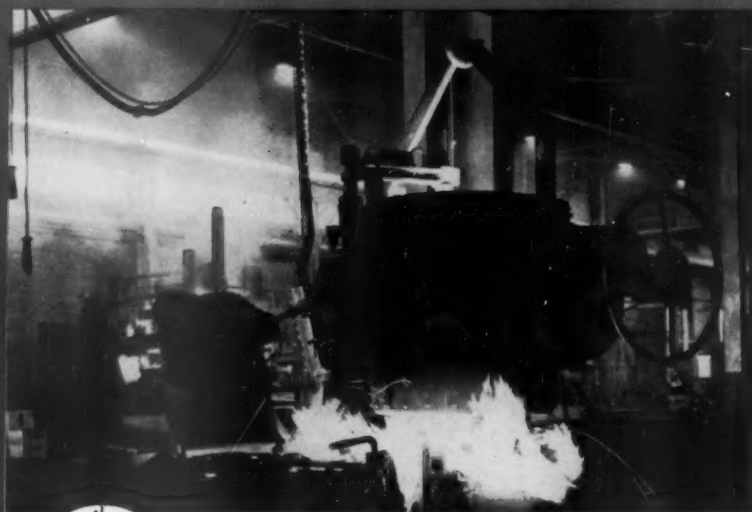


10:40 a.m. Rapid steel analysis. Less than two hours after charging the furnace, the last analysis of alloying elements in the molten metal is made on a direct reading spectrometer. Finished in a matter of minutes (as compared to older methods that required several hours) the analysis is rushed by air tube to the metallurgical control engineer, and the steel is ready to . . .

from steel scrap

to rolling wheel

A Tough Timetable



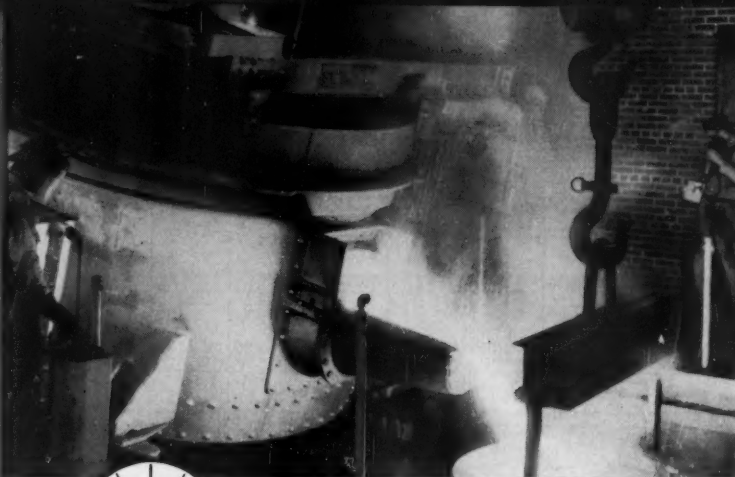
10:59 a.m. Cast! The mechanized conveyor moves the molds into position and the steel is poured. There is a hiss of flame and flung spark as the metal hits the mold cavity. Made on highly automatic equipment, these molds are engineered to utilize the strength of cast steel to the utmost. Slowly cooling, the wheel molds move on to shake-out and . . .

*rigidly timed quality control packs more value
in Southern® cast steel wheels*

Casting quality into Southern steel wheels — quality that means more value for the dollar — is a dramatic, almost split-second job. From the moment the carefully selected scrap hits the electric furnace to the precision machining of the hub and tread, skilled experts commanding a battery of

electronic measuring equipment call the shots in this exciting casting story.

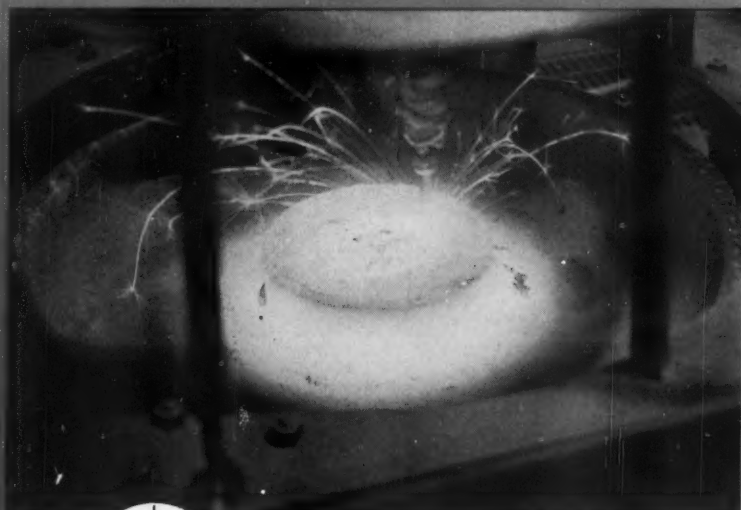
Result? Freight service wheels of uniform quality that consistently roll farther and cost less — *Southern cast steel wheels.*



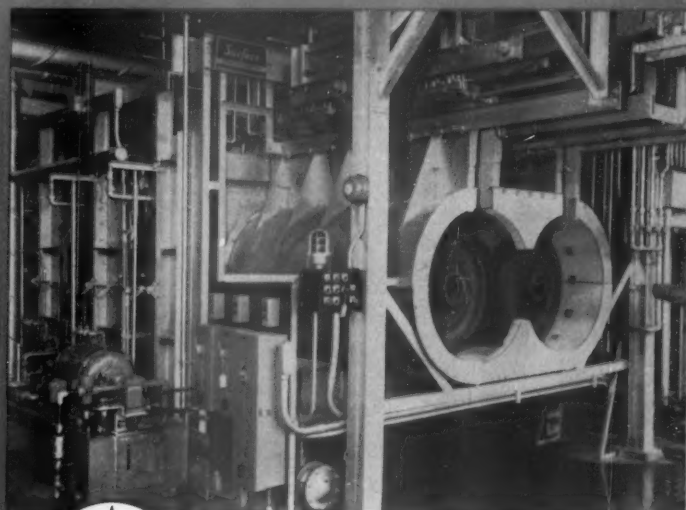
10:45 a.m. Pour! The furnace tips and white hot metal thunders into the reservoir ladle. The timing is growing more delicate as the seconds pass, for once out of the furnace, the steel begins to cool. Under the ever-watchful pyrometer of the metallurgical control engineer, who keeps a careful record of time and temperature, the steel is transferred at the right moment to the pouring ladles, to await the . . .



10:58 a.m. Approach to casting temperature. The metallurgical control engineer watches the moving temperature graph of the thermocouples that have been dipped in the pouring ladles. Southern cast steel wheels are cast only when the molten steel is within a very narrow range of temperature. This is one of the secrets of Southern wheel quality. At the right moment the wheels are . . .



12:07 p.m. Rough cut of hub. The conveying system is carefully timed to bring the wheel to the next critical step: rough cut of the hub. An oxy-acetylene torch smoothly and automatically slices out a glowing cylinder of metal from the wheel's center in minimum time. In this way heat effects are eliminated. After slow and carefully timed cooling in the annealing pits . . .



7:00 p.m. Heat treatment. The wheels are moved to the two-stage, heat-treating furnaces. Here they are given an electronically controlled heat treatment that lasts about 16 hours, insuring a refined grain structure and exceptional toughness. The wheels are then shot-blasted, inspected and ready for . . .



Precision machining. The cast steel wheels are machined at a single chucking on special automatic vertical turret lathes, insuring dimensional accuracy and true concentricity. All that remains now is final inspection and the wheels are off to their job of providing the railroads with more value for the dollar.



RAILROAD PRODUCTS DIVISION

530 Fifth Avenue • New York 36, N. Y.



REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted.)

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1957

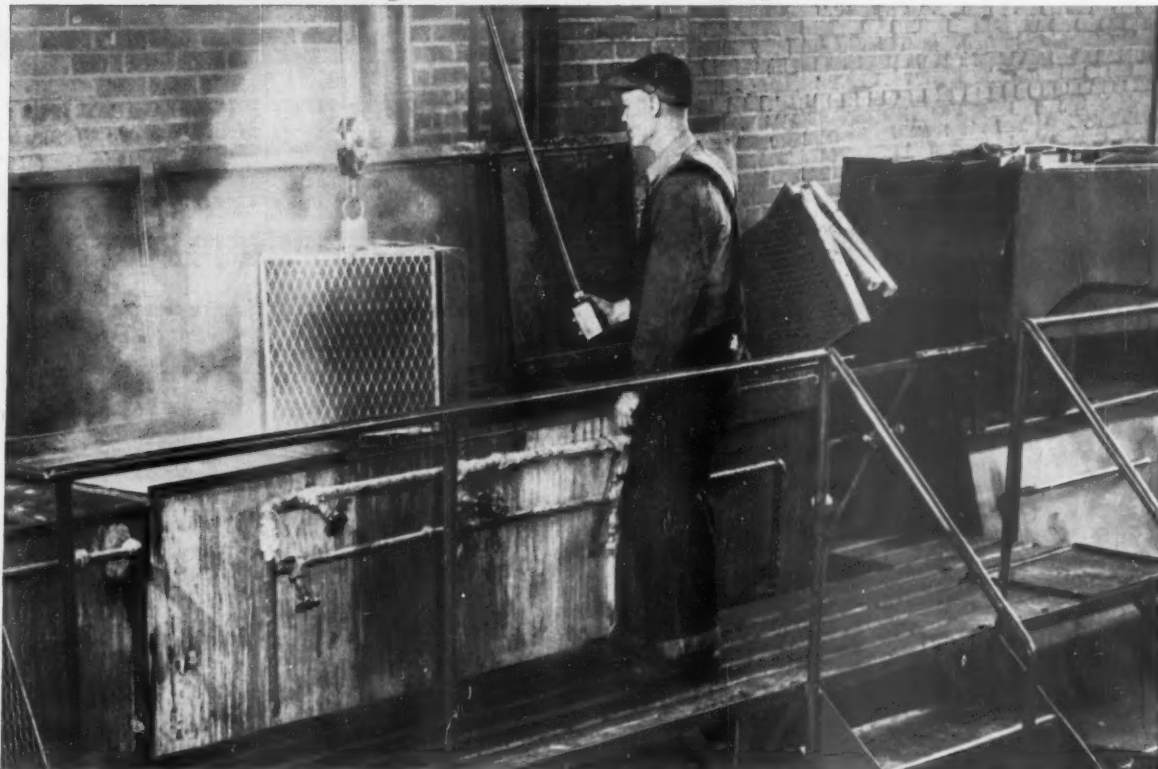
Name of Road	Operating Revenues			Maint. Way and Structures			Operating Expenses			Total	Retire- ments	Traffic	Trans- por- tation	Total 1957	Total 1956	Operating ratio 1957-1956	Net railway operating from tax accruals	Net Railway operating income 1957-1956		
	Freight	Pass.		Total 1957	Total 1956	Retire- ments	Total 1957	Total 1956	Retire- ments										Total 1957	Total 1956
		Inc.	Inc.																	
Average miles operated during period	1957	1956	1955	1957	1956	1955	1957	1956	1955	1957	1956	1955	1957	1956	1955	1957	1956	1955		
Akron, Canton & Youngstown Aug.	171	856	848	378	377	46	855	848	815	846	835	825	69	75	77	886	859	840		
Akron, Canton & Youngstown Aug.	171	856	848	378	377	46	855	848	815	846	835	825	69	75	77	886	859	840		
Atlantic Coast Line 8 mos.	13,172	42,813	84,568	79,983	78,986	7,999	10,642	9,534	12,730	17,186	17,307	37,584	295,546	295,546	76	94,857	39,488	44,111		
Atlantic Coast Line 8 mos.	13,172	42,813	84,568	79,983	78,986	7,999	10,642	9,534	12,730	17,186	17,307	37,584	295,546	295,546	76	94,857	39,488	44,111		
Atlanta & St. Andrews Bay 8 mos.	81	3,844	3,354	344	338	26	55	55	55	55	55	1,357	1,357	1,357	42	711	625	587		
Atlanta & St. Andrews Bay 8 mos.	81	3,844	3,354	344	338	26	55	55	55	55	55	1,357	1,357	1,357	42	711	625	587		
Atlanta & West Point 8 mos.	93	325	311	368	332	44	55	55	55	55	55	1,357	1,357	1,357	42	711	625	587		
Atlanta & West Point 8 mos.	93	325	311	368	332	44	55	55	55	55	55	1,357	1,357	1,357	42	711	625	587		
Western of Alabama 8 mos.	133	258	28	333	331	41	28	46	63	115	139	1,150	2,283	2,283	89	23	—	5		
Western of Alabama 8 mos.	133	258	28	333	331	41	28	46	63	115	139	1,150	2,283	2,283	89	23	—	5		
Atlantic Coast Line 8 mos.	5,292	18,272	14,233	12,630	12,573	1,910	2,567	2,567	2,567	2,567	2,567	3,184	3,184	3,184	85	305	285	285		
Atlantic Coast Line 8 mos.	5,292	18,272	14,233	12,630	12,573	1,910	2,567	2,567	2,567	2,567	2,567	3,184	3,184	3,184	85	305	285	285		
Charleston & West. Carolina Aug.	345	547	558	558	558	128	132	111	98	28	21	1,452	445	445	77	185	75	77		
Charleston & West. Carolina Aug.	345	547	558	558	558	128	132	111	98	28	21	1,452	445	445	77	185	75	77		
Baltimore & Ohio 8 mos.	6,095	1,661	39,476	38,906	4,438	3,903	1,059	6,871	6,871	1,059	1,059	1,059	28,756	28,756	70	61,570	28,431	4,333		
Baltimore & Ohio 8 mos.	6,095	1,661	39,476	38,906	4,438	3,903	1,059	6,871	6,871	1,059	1,059	1,059	28,756	28,756	70	61,570	28,431	4,333		
Staten Island Rapid Transit Aug.	29	637	612	260	259	46	112	112	112	14	14	1,201	2,357	2,357	106	—	725	—		
Staten Island Rapid Transit Aug.	29	637	612	260	259	46	112	112	112	14	14	1,201	2,357	2,357	106	—	725	—		
Hanover & Aroostook 8 mos.	602	837	29	906	1,023	174	404	404	291	234	104	33	302	302	90	63	191	230		
Hanover & Aroostook 8 mos.	602	837	29	906	1,023	174	404	404	291	234	104	33	302	302	90	63	191	230		
Blossermer & Lake Erie 8 mos.	200	10,417	11,586	2,400	2,364	180	2,364	2,364	180	180	180	3,200	6,838	6,838	70	2,594	1,179	2,735		
Blossermer & Lake Erie 8 mos.	200	10,417	11,586	2,400	2,364	180	2,364	2,364	180	180	180	3,200	6,838	6,838	70	2,594	1,179	2,735		
Boston & Maine 8 mos.	1,571	5,510	1,648	7,311	7,225	1,661	906	906	1,661	1,661	1,661	1,661	1,661	1,661	1,661	1,661	1,661	1,661		
Boston & Maine 8 mos.	1,571	5,510	1,648	7,311	7,225	1,661	906	906	1,661	1,661	1,661	1,661	1,661	1,661	1,661	1,661	1,661	1,661		
Canadian Pacific Lines in Me. 8 mos.	234	275	72	381	399	141	132	13	68	17	9	166	395	413	103.7	183.5	—14	—73		
Canadian Pacific Lines in Me. 8 mos.	234	275	72	381	399	141	132	13	68	17	9	166	395	413	103.7	183.5	—14	—73		
Carolina & Northwestern 8 mos.	284	3,240	2,377	4,211	2,614	466	520	56	130	84	32	625	1,357	1,434	57.7	1,054	217	544		
Carolina & Northwestern 8 mos.	284	3,240	2,377	4,211	2,614	466	520	56	130	84	32	625	1,357	1,434	57.7	1,054	217	544		
Central of Georgia 8 mos.	1,763	3,240	1,75	3,677	2,955	3,93	5,014	4,786	1,385	1,385	1,385	1,385	1,385	1,385	1,385	1,385	1,385	1,385		
Central of Georgia 8 mos.	1,763	3,240	1,75	3,677	2,955	3,93	5,014	4,786	1,385	1,385	1,385	1,385	1,385	1,385	1,385	1,385	1,385	1,385		
Central of New Jersey 8 mos.	612	4,803	542	5,392	5,400	480	879	173	77	2,339	4,179	4,231	77	77.5	77.5	1,212	490	506		
Central of New Jersey 8 mos.	612	4,803	542	5,392	5,400	480	879	173	77	2,339	4,179	4,231	77	77.5	77.5	1,212	490	506		
Central Vermont 8 mos.	383	3,726	83	1,020	989	281	534	17	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800		
Central Vermont 8 mos.	383	3,726	83	1,020	989	281	534	17	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800		
Chesapeake & Ohio 8 mos.	5,132	26,525	4,963	28,901	27,557	34,558	30,732	3,483	47,831	45,325	14,123	6,852	35,492	25,578	184,966	62.5	67.4	67.4		
Chesapeake & Ohio 8 mos.	5,132	26,525	4,963	28,901	27,557	34,558	30,732	3,483	47,831	45,325	14,123	6,852	35,492	25,578	184,966	62.5	67.4	67.4		
Chicago & Eastern Illinois 8 mos.	862	2,282	1,795	2,574	2,420	334	381	39	322	328	146	134	1,254	2,438	2,424	77.1	939	416		
Chicago & Eastern Illinois 8 mos.	862	2,282	1,795	2,574	2,420	334	381	39	322	328	146	134	1,254	2,438	2,424	77.1	939	416		
Chicago & Illinois Midland 8 mos.	121	686	762	662	586	76	58	58	185	117	74	30	158	195	414	56.3	63.7	1,128		
Chicago & Illinois Midland 8 mos.	121	686	762	662	586	76	58	58	185	117	74	30	158	195	414	56.3	63.7	1,128		
Chicago & North Western 8 mos.	9,402	11,692	12,748	14,978	14,920	2,363	3,433	2,770	23,662	25,952	7,954	3,643	65,001	126,417	137,794	85.4	91.7	21,360		
Chicago & North Western 8 mos.	9,402	11,692	12,748	14,978	14,920	2,363	3,433	2,770	23,662	25,952	7,954	3,643	65,001	126,417	137,794	85.4	91.7	21,360		
Chicago, Burlington & Quincy Aug.	8,763	19,542	12,041	167,455	166,947	26,499	3,978	3,374	3,715	3,697	948	547	8,127	19,386	19,386	79.1	78.9	1,984		
Chicago, Burlington & Quincy Aug.	8,763	19,542	12,041	167,455	166,947	26,499	3,978	3,374	3,715	3,697	948	547	8,127	19,386	19,386	79.1	78.9	1,984		
Chicago Great Western 8 mos.	1,470	2,880	40	3,090	3,168	3,508	439	131	439	439	116	116	922	2,189	2,189	2,189	2,189	2,189		
Chicago Great Western 8 mos.	1,470	2,880	40	3,090	3,168	3,508	439	131	439	439	116	116	922	2,189	2,189	2,189	2,189	2,189		
Chic. Milw., St. Paul & Pacific Aug.	10,615	20,395	1,727	24,551	24,498	3,256	3,953	431	3,327	3,327	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816		
Chic. Milw., St. Paul & Pacific Aug.	10,615	20,395	1,727	24,551	24,498	3,256	3,953	431	3,327	3,327	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816		
Chicago, Rock Is. & Pacific Aug.	7,992	15,730	10,771	16,737	16,628	28,666	28,217	3,439	30,551	31,578	6,871	4,393	67,812	141,096	140,571	84.1	84.3	26,730		
Chicago, Rock Is. & Pacific Aug.	7,992	15,730	10,771	16,737	16,628	28,666	28,217	3,439	30,551	31,578	6,871	4,393	67,812	141,096	140,571	84.1	84.3	26,730		
Glennfield 8 mos.	7,594	17,769	11,578	14,108	13,997	19,628	18,090	1,973	23,719	22,440	4,760	4,469	53,819	109,640	102,526	77.3	75.6	1,789		
Glennfield 8 mos.	7,594	17,769	11,578	14,108	13,997	19,628	18,090	1,973	23,719	22,440	4,760	4,469	53,819	109,640	102,526	77.3	75.6	1,789		
Colorado & Southern 8 mos.	718	1,261	89	1,860	1,853	1,253	1,254	17	284	376	77	58	436	1,246	1,246	1,246	1,246	1,246		
Colorado & Southern 8 mos.	718	1,261	89	1,860	1,853	1,253	1,254	17	284	376	77	58	436	1,246	1,246	1,246	1,246	1,246		
Colorado & Southern 8 mos.	718	1,261	89	1,860	1,853	1,253	1,254	17	284	376	77	58	436	1,246	1,246	1,246	1,246	1,246		
Colorado & Southern 8 mos.	718	1,261	89	1,860	1,853	1,253	1,254	17	284	376	77	58	436	1,246	1,246	1,246	1,246	1,246		
Colorado & Southern 8 mos.	718	1,261	89	1,860	1,853	1,253	1,254	17	284	376	77	58	436	1,246	1,246	1,246	1,246	1,246		
Colorado & Southern 8 mos.	718	1,261	89	1,860	1,853	1,253	1,254	17	284	376	77	58	436	1,246	1,246	1,246	1,246	1,246		
Colorado & Southern 8 mos.	718	1,261	89	1,860	1,853	1,253	1,254	17	284	376	77	58	436	1,246	1,246	1,246	1,246	1,246		
Colorado & Southern 8 mos.	718	1,261	89	1,860	1,853	1,253	1,254	17	284	376	77	58	436	1,246	1,246	1,246	1,246	1,246		
Colorado & Southern 8 mos.	718	1,261	89	1,860	1,853	1,253	1,254	17	284	376	77	58	436	1,246	1,246	1,246	1,246	1,246		
Colorado & Southern 8 mos.	718	1,261	89	1,860	1,853	1,253	1,254	17	284	376	77	58	436	1,246	1,246	1,246	1,246	1,246		
Colorado & Southern 8 mos.	718	1,261	89	1,860	1,853	1,253	1,254	17	284	376	77	58	436	1,246	1,246	1,246	1,246	1,246		
Colorado & Southern 8 mos.	718	1,261	89	1,860	1,853	1,253	1,254	17	284	376	77	58	436	1,246	1,246	1,246	1,246	1,246		
Colorado & Southern 8 mos.	718	1,261	89	1,860	1,853	1,253	1,254	17	284	376	77	58	436	1,246	1,246	1,246	1,246	1,246		
Colorado & Southern 8 mos.	718	1,261	89	1,860	1,853</															

ENGINEER'S FIELD REPORT

PRODUCT CHEVRON* FILTER COAT

FIRM MILWAUKEE R.R.
Seattle, Washington

Special adhesive coating increases efficiency of filters up to 50%



THE MILWAUKEE ROAD has found Chevron* Filter Coat increases the efficiency of its air filters as much as 50% compared to the oils they previously used—according to the District Diesel Supervisor. They have used this product on impingement-type car-body and engine-air filters since 1953, when it was first introduced.

To service the great number of filters in use, the railroad installed a special production line. Process starts with a thorough steam and chemical cleaning of filters. They are then dipped (above) in heated Chevron Filter Coat. After draining 15 minutes, filters are placed in drying ovens.

Chevron Filter Coat gives complete protection not only against heavy dirt and dust, but also grit from sanding. Even under adverse operating conditions, Chevron Filter Coat does not drip off screens, but maintains its high wicking ability, and keeps dust and grit out of engines.

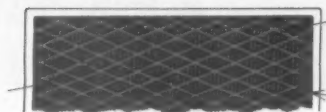


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TRADEMARK "CHEVRON" AND "V" SIGN
R.G. U.S. PAT. OFF.

STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20
THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey

Why Chevron* Filter Coat ups efficiency of air filters



- Will not drip off screens—gives full filtering efficiency through entire service period.
- Easily applied and cleaned.
- High wicking ability—quickly soaks dust particles.

*The Chevron Brand covers the line of industrial products formerly sold under the Calol name. This is a name change only. The high quality and specifications remain the same.

STANDARD OIL COMPANY OF TEXAS, El Paso
THE CALIFORNIA COMPANY, Denver 1, Colorado

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1937

Name of Road	Average mileage operated during period	Operating Revenues			Total			Operating Expenses			Operating ratio 1937-1936	Total 1936	Total 1937	Trans- portation	Total 1937	Net from operation 1937-1936	Railway tax accruals	Net Railway income 1937-1936
		Freight	Pass.	(inc. inc.)	1937	1936	Retire- ment	1937	1936	and Deprec.								
Elgin, Joliet & Eastern.....	Aug. 236	3,790	4,789	8,579	284	21	127	143	31	326	75.5	544	544	236	91	48	387	
Erle.....	Aug. 332	2,283	2,252	4,535	565	65	1,077	1,432	78	2,609	87.6	526	526	236	91	48	387	
Florida East Coast.....	Aug. 2,207	13,625	4,789	18,414	1,834	2,237	3,099	2,933	73	5,732	88.9	1,834	1,834	236	91	48	387	
Georgia Railroad.....	Aug. 321	4,438	2,712	7,150	3,337	473	4,726	4,490	236	5,226	77.8	1,834	1,834	236	91	48	387	
Georgia & Florida.....	Aug. 332	2,283	2,252	4,535	565	65	1,077	1,432	78	2,609	87.6	526	526	236	91	48	387	
Grand Trunk Western.....	Aug. 951	35,033	1,832	36,865	5,548	492	7,376	7,450	737	26,184	85.9	3,672	3,672	236	91	48	387	
Great Northern.....	Aug. 8,285	24,771	7,733	32,504	5,023	280	4,743	4,743	812	19,774	90.7	15,731	15,731	236	91	48	387	
Green Bay & Western.....	Aug. 8,224	16,419	1,357	17,776	1,357	4	1,357	1,357	9	1,357	71.5	1,357	1,357	236	91	48	387	
Gulf, Mobile & Ohio.....	Aug. 2,274	3,001	371	3,372	2,387	817	1,569	1,569	326	2,387	72.2	2,387	2,387	236	91	48	387	
Illinois Central.....	Aug. 6,502	30,719	2,894	33,613	3,784	3,985	4,448	4,448	889	18,308	75.8	18,308	18,308	236	91	48	387	
Illinois Terminal.....	Aug. 6,502	14,349	14,927	29,276	3,083	3,108	3,108	3,108	40	3,108	75.8	3,108	3,108	236	91	48	387	
Kansas City Southern.....	Aug. 339	7,159	219	7,378	1,343	8,509	1,343	1,343	186	1,343	75.8	1,343	1,343	236	91	48	387	
Kansas, Oklahoma & Gulf.....	Aug. 327	4,327	3,339	7,666	66	95	32	32	12	95	88.4	32	32	236	91	48	387	
Lake Superior & Ishpeming.....	Aug. 145	5,852	3,746	9,598	647	69	8	8	18	2	18	40.1	2	18	1,445	243	218	
Lehigh & Hudson River.....	Aug. 145	5,852	3,746	9,598	647	69	8	8	18	2	18	40.1	2	18	1,445	243	218	
Lehigh & New England.....	Aug. 96	2,498	2,901	5,399	306	280	19	331	269	1,741	69.6	1,741	1,741	236	91	48	387	
Lehigh Valley.....	Aug. 176	4,951	3,377	8,328	654	560	60	60	18	2	18	40.1	2	18	1,445	243	218	
Litchfield & Madison.....	Aug. 44	2,373	2,399	4,772	12	12	12	12	12	12	88.4	12	12	236	91	48	387	
Long Island.....	Aug. 351	1,297	4,266	5,563	732	710	91	1,062	961	167	82.8	4,468	4,468	236	91	48	387	
Louisiana & Arkansas.....	Aug. 351	1,297	4,266	5,563	732	710	91	1,062	961	167	82.8	4,468	4,468	236	91	48	387	
Louisville & Nashville.....	Aug. 4,720	16,050	979	17,029	2,428	2,529	236	3,383	4,375	1,040	81.2	14,457	14,457	236	91	48	387	
Maine Central.....	Aug. 944	1,835	123	1,958	446	29	381	378	81	25	85.9	1,958	1,958	236	91	48	387	
Minneapolis & St. Louis.....	Aug. 944	1,835	123	1,958	446	29	381	378	81	25	85.9	1,958	1,958	236	91	48	387	
Min., Northfield & Southern.....	Aug. 1,392	1,835	123	1,958	446	29	381	378	81	25	85.9	1,958	1,958	236	91	48	387	
Min., St. Paul & S. Marie.....	Aug. 3,222	4,356	119	4,475	1,312	1,048	47	683	649	128	81.3	3,842	3,842	236	91	48	387	
Missouri-Illinois.....	Aug. 3,222	4,356	119	4,475	1,312	1,048	47	683	649	128	81.3	3,842	3,842	236	91	48	387	
Missouri-Kansas-Texas Lines.....	Aug. 3,183	4,091	1,177	5,268	7,925	6,981	749	8,350	7,839	1,893	81.6	7,839	7,839	236	91	48	387	
Missouri Pacific.....	Aug. 9,660	22,238	1,157	23,395	3,522	4,219	321	4,540	4,381	1,019	77.8	19,510	19,510	236	91	48	387	
Monon.....	Aug. 541	13,169	535	13,704	1,526	2,153	160	2,491	2,364	607	83.8	12,559	12,559	236	91	48	387	
Montgomery.....	Aug. 177	565	31	596	14	2,783	67	9	1	190	82.6	2,783	2,783	236	91	48	387	
Nashville, Chattanooga & St. Louis.....	Aug. 1,043	2,394	124	2,518	2,999	3,435	370	425	320	136	83.2	2,238	2,238	236	91	48	387	
New York Central.....	Aug. 10,621	38,328	7,389	45,717	6,159	6,159	1,277	7,436	7,436	1,277	78.3	44,440	44,440	236	91	48	387	
Pittsburgh & Lake Erie.....	Aug. 221	3,501	59	3,560	2,657	2,657	74	1,354	1,354	74	84.5	2,657	2,657	236	91	48	387	
New York, Chicago & St. Louis.....	Aug. 2,179	110,754	1,307	112,061	14,700	13,242	1,332	19,981	18,919	3,567	78.3	10,467	10,467	236	91	48	387	
New York, New Haven & Htdld Aug.....	Aug. 1,762	7,745	4,808	12,553	1,621	1,645	259	2,252	1,863	585	78.7	11,170	11,170	236	91	48	387	
New York Connecting.....	Aug. 1,762	6,178	36,028	42,206	1,621	1,645	259	2,252	1,863	585	78.7	11,170	11,170	236	91	48	387	
New York, Susque. & Western.....	Aug. 120	353	36	389	422	49	51	8	57	12	88.3	353	353	236	91	48	387	



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REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1957

Name of Road	Average mileage operated during period	Operating Revenues			Operating Expenses			Total 1957	Total 1956	Operating ratio 1957/1956	Net railway operating income 1957	Net railway operating income 1956
		Freight	Pass.	Total (inc. misc.)	Total 1957	Total 1956	Retire-ment and Deprec.					
Norfolk & Western.....	Aug.	21,757	320	22,077	2,676	3,778	961	3,637	13,708	59.6	8,338	5,232
Norfolk Southern.....	Aug.	181,832	2,233	184,065	22,212	33,139	1,133	21,079	197,772	85.2	67,338	4,166
Norfolk Southern.....	8 mos.	6,064	6,998	13,062	1,648	3,157	118	1,966	5,514	81.4	1,329	889
Norfolk Southern.....	8 mos.	6,064	6,998	13,062	1,648	3,157	118	1,966	5,514	81.4	1,329	889
Northern Pacific.....	Aug.	185,339	4,736	190,075	19,089	22,774	2,778	16,306	185,815	85.5	69,611	16,492
Northern Pacific.....	8 mos.	6,331	185,339	190,075	19,089	22,774	2,778	16,306	185,815	85.5	69,611	16,492
Northwestern Pacific.....	Aug.	1,253	0	1,253	155	134	3	122	730	58.7	233	192
Northwestern Pacific.....	8 mos.	1,253	0	1,253	155	134	3	122	730	58.7	233	192
Pennsylvania.....	Aug.	9,960	68,453	78,413	10,465	14,447	18,124	3,658	68,449	82.7	15,175	8,419
Pennsylvania.....	8 mos.	9,960	68,453	78,413	10,465	14,447	18,124	3,658	68,449	82.7	15,175	8,419
Penn.-Read. Seashore Lines.....	Aug.	522,089	84,156	606,245	76,921	70,487	11,626	58,361	583,222	83.9	187,741	48,068
Penn.-Read. Seashore Lines.....	8 mos.	522,089	84,156	606,245	76,921	70,487	11,626	58,361	583,222	83.9	187,741	48,068
Piedmont & Northern.....	Aug.	407	3,374	3,781	48	33	30	18	271	53.9	184	93
Piedmont & Northern.....	8 mos.	407	3,374	3,781	48	33	30	18	271	53.9	184	93
Pittsburgh & West Virginia.....	Aug.	860	130	990	28	249	241	75	1,755	58.9	1,694	499
Pittsburgh & West Virginia.....	8 mos.	860	130	990	28	249	241	75	1,755	58.9	1,694	499
Reading.....	Aug.	6,744	547	7,291	6,039	1,103	144	44	6,183	86.8	126	115
Reading.....	8 mos.	6,744	547	7,291	6,039	1,103	144	44	6,183	86.8	126	115
Richmond, Fred. & Potomac.....	Aug.	1,339	558	1,897	231	231	30	191	1,587	70.9	445	245
Richmond, Fred. & Potomac.....	8 mos.	1,339	558	1,897	231	231	30	191	1,587	70.9	445	245
Rutland.....	Aug.	11,974	4,291	16,265	18,471	18,568	1,131	12,337	13,436	83.5	3,843	2,128
Rutland.....	8 mos.	11,974	4,291	16,265	18,471	18,568	1,131	12,337	13,436	83.5	3,843	2,128
Sacramento Northern.....	Aug.	382	114	496	86	59	49	17	363	89.9	86.4	13
Sacramento Northern.....	8 mos.	382	114	496	86	59	49	17	363	89.9	86.4	13
St. Louis-San Francisco.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
St. Louis-San Francisco.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
St. Louis-San Fran. & Texas.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
St. Louis-San Fran. & Texas.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
St. Louis Southwestern Lines.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
St. Louis Southwestern Lines.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Savannah & Atlanta.....	Aug.	144	2,585	2,729	356	427	55	19	1,091	69.4	189	37
Savannah & Atlanta.....	8 mos.	144	2,585	2,729	356	427	55	19	1,091	69.4	189	37
Seaboard Air Line.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Seaboard Air Line.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Southern Railway.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Southern Railway.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Alabama Great Southern.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Alabama Great Southern.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Cham., N. Orleans & Tex. Pac. Aug.	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Cham., N. Orleans & Tex. Pac. Aug.	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Georgia Southern & Florida.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Georgia Southern & Florida.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
New Orleans & Northeastern Aug.	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
New Orleans & Northeastern Aug.	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Southern Pacific.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Southern Pacific.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Texas & New Orleans.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Texas & New Orleans.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Spokane International.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Spokane International.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Spokane, Portland & Seattle.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Spokane, Portland & Seattle.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Tennessee Central.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Tennessee Central.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Texas & Pacific.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Texas & Pacific.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Texas Mexican.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Texas Mexican.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Toledo, Peoria & Western.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Toledo, Peoria & Western.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Union Pacific.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Union Pacific.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Virginian.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Virginian.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Wabash.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Wabash.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Ann Arbor.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Ann Arbor.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Western Maryland.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Western Maryland.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Western Pacific.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Western Pacific.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Wisconsin Central.....	Aug.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341
Wisconsin Central.....	8 mos.	1,341	1,341	2,682	1,341	1,341	1,341	1,341	1,341	100.0	1,341	1,341



EVERYTHING DIFFERENT BUT THE WHEELS

This is New York Central's Xplorer—a low-slung beauty that's new from the wheels up. Only 11 feet in height, the high-speed streamliner boasts a center of gravity just 44 inches above the tracks. It offers its passengers greater comfort, greater convenience, faster travel and a smoother ride—an entirely new concept of transportation by rail.

But not everything's new. The wheels are one thing that *couldn't* be improved upon. Thus, this articulated train of the future is riding on the same type wheels that have carried its predecessors for many years—USS Multiple Wear Wrought Steel Wheels.

The imaginative design of this Pullman-Standard train is based on economy of construction, low maintenance, high

speed, safety, and improved comfort. USS Multiple Wear Wrought Steel Wheels possess characteristics that help designers attain all of these desirable goals. They afford greater economy, for they last longer than any other wheel. They can take prolonged wear, severe braking and high-speed impacts, because they are tough and safe. All of this is attributable to the forging process by which they are made—the process that puts the word "Wrought" in their name.

In addition to all passenger applications, USS Wrought Steel Wheels are highly practical and popular for freight service, where many far-sighted railroad men are already reaping the benefits of greater dependability and economy made possible by these tougher, longer-wearing wheels.

USS Wrought Steel Wheels are produced at two strategically located plants: The McKees Rocks (Pittsburgh), Pennsylvania plant, serving the East and Southeast; and the Gary, Indiana plant, supplying the Western and Southwestern lines.

SEE THE UNITED STATES STEEL HOUR. It's a full-hour TV program presented every other week by United States Steel. Consult your local newspaper for time and station.

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USS WROUGHT STEEL WHEELS



UNITED STATES STEEL



Westinghouse
Friction Draft Gear
Type NY-11-F
Certified A.A.R.

Friction does it ...and does it well!

Effectively... the Westinghouse Friction Draft Gear puts friction to work. For the *smooth* start of a freight train, there is a soft initial action. Then when the BIG impact comes, the Westinghouse Gear is ready instantly with its **HIGH** shock-absorbing capacity. The initial action blends smoothly into a high ultimate frictional resistance.

In other words, the shock is absorbed by friction before it reaches the car and lading. Thereby, Westinghouse Friction Draft Gear cuts lading damage to a minimum; constantly stands guard against unnecessary rolling stock maintenance costs. Continuing research and development *keep* the Westinghouse Gear practical and economical...as well as effective!



Cardwell V-18
Friction Draft Gear

Cardwell R-20
Rubber Draft Gear

Cardwell M-25
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Specify
**CARDWELL
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MARKET OUTLOOK *at a glance*

Loadings Dip Slightly Below Previous Week

Loadings of revenue freight in the week ended October 12 totaled 741,520 cars, the Association of American Railroads announced on October 17. This was a decrease of 6,127 cars, or 0.8%, compared with the previous week; a decrease of 81,668 cars, or 9.9%, compared with the corresponding week last year; and a decrease of 80,058 cars, or 9.7%, compared with the equivalent 1955 week.

Loadings of revenue freight for the week ended October 5 totaled 747,647 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS For the week ended Saturday, October 5			
District	1957	1956	1955
Eastern	115,104	127,128	127,285
Allegheny	145,331	152,863	153,052
Poconos	63,039	67,356	65,048
Southern	116,978	131,312	131,202
Northwestern ..	124,474	140,930	140,197
Central Western	129,448	134,916	127,780
Southwestern ...	53,273	60,468	58,995
Total Western Districts	307,195	336,334	326,972
Total All Roads	747,647	815,193	801,559
Commodities:			
Grain and grain products	57,046	57,898	54,904
Livestock	10,905	14,626	13,746
Coal	138,700	144,565	137,704
Coke	10,199	12,505	12,943
Forest Products	34,438	44,555	44,813
Ore	81,033	87,214	81,563
Merchandise l.c.l.	56,915	62,619	65,303
Miscellaneous ..	358,411	391,111	390,583
October 5	747,647	815,193	801,559
September 28 ..	739,266	831,648	815,535
September 21 ..	724,934	822,436	813,720
September 14 ..	741,147	820,849	817,234
September 7 ...	646,118	679,651	701,992
Cumulative total, 40 weeks ...	27,883,858	28,995,323	28,728,931

IN CANADA.—Carloadings for the nine-day period ended September 30 totaled 104,606 cars, compared with 87,938 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
September 30, 1957 ...	104,606	36,914
September 30, 1956 ...	105,307	40,878
Cumulative Totals:		
September 30, 1957 ...	3,042,830	1,242,971
September 30, 1956 ...	3,308,954	1,305,239

New Equipment

FREIGHT-TRAIN CARS

► **Bangor & Aroostook.**—Ordered 150 end rack roller-bearing-equipped pulpwood cars, Magor Car, at approximate cost of \$1,580,000; delivery expected early next summer.

► **Chicago & North Western.**—Ordered 275 70-ton covered hopper cars and 200 70-ton mill-type gondola cars, Pullman-Standard; covered hopper cars will be delivered next January, and gondola cars next March.

SPECIAL

► **Louisville & Nashville.**—Will install roller bearings on 230 passenger-train cars, including 120 baggage cars, 30 combination baggage-mail cars, and 30 coaches; work will be done in road's South Louisville, Ky., shops, at unit cost of approximately \$3,000.

LOCOMOTIVES

► **South African Railways.**—Ordered 45 1,320-hp diesel units, General Electric, at cost exceeding \$7,500,000; GE said order represents first part of program designed to replace present motive power with diesel-electric locomotives.

Maintenance Expenditures

► **Up 6.2% in July.**—Expenditures by Class I roads for maintenance of equipment, way and structures in July were up \$16.5 million from same month last year, according to report of ICC Bureau of Transport Economics and Statistics summarized below:

	July '57	July '56	% Increase
Maintenance of Way & Structures ..	\$126,429,805	\$117,983,994	7.2
Maintenance of Equipment	156,504,094	148,415,894	5.4
Totals	282,933,899	266,399,888	6.2

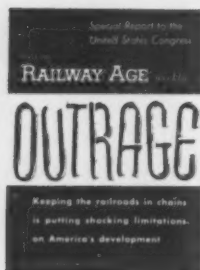
New Facilities

► **Canadian Pacific.**—Awarded contract for extension to diesel servicing shop at Alyth, Alta., at approximate cost of \$400,000; completion of project is set for late 1958.

► **Monon.**—Started construction of a storage warehouse as addition to present freight house at Indianapolis; project, planned for completion in May 1958, will cost estimated \$300,000; E. W. Hauser Construction Company is contractor; road is also replacing, at estimated cost of \$170,000, bridge over Walnut Creek, Putnam County, Ind., with American Bridge Company as major contractor and completion scheduled for next spring; bridge was lost in flood last June.

► **New York Central.**—Plans construction of \$8 million electronic classification yard near Indianapolis, to replace facilities in use in city proper; no date set for start of project.

Letters from Readers



MORE
COMMENTS
ABOUT
'SPECIAL
REPORT'

"Continue"

CHICAGO

TO THE EDITOR:

Your issue touched all bases in decrying the sorry tangle of outmoded regulation and the outrageous favoritism for competitors which are plaguing our railroads.

Giving the subject the comprehensive coverage you did could, in less capable hands, result in a whirl of confusion. Instead, your tightly organized, tautly edited treatment presented an admirably lucid

picture of the governmental roadblocks the railroad industry faces.

Your final word, "How to end the outrage," is as complete an inventory of essential steps as could be asked for.

My only suggestion about how you might best make a continuing effort along the same lines—would be simply that you do continue, for the railroads' case is one that must be told as widely and often as possible if we are ever to shake off the shackles you so ably spotlighted.

HAROLD M. SIMS

Director of Public Relations
Association of Western Railways

"Intelligent Appraisal"

WILMINGTON, N. C.

TO THE EDITOR:

I am much impressed and gratified that you have taken such a firm and courageous stand.

I am delighted to know the issue is being sent to government officials and legislators, and I intend personally to speak to several of my friends who fall in that category and suggest a very careful read-

ing of this thought-provoking information.

It is my personal opinion that only through intelligent appraisal of the situation on the part of the American public can we get relief, and I think Railway Age is making an outstanding contribution to this end.

W. T. RICE

President
Atlantic Coast Line

"Will Take More"

DALLAS, TEX.

TO THE EDITOR:

The Special Report is terrific. I am hopeful that this Railway Age will make at least a small dent upon the individual and collective minds of people in general and in particular those who sit in judgment over the industry. But it is going to take more than this to break down the prejudices which now stand as barriers to equality and justice for the railroads. It is going to be a long, hard, uphill fight.

J. B. SHORES

Director, Employee-Public Relations
Texas & Pacific

Railroading



After Hours with Jim Lyne

WHERE AUTOS ARE NEW—I spent a day in Bermuda a week or so ago at the passenger officers' meeting, and got to talking to a taxi driver about the abandonment of Bermuda's narrow-gauge railway which, he reminded me, was junked in 1948—or just two years after automobiles were first permitted on the island. Before that, automobiles and buses were forbidden.

Local transportation of passengers is strictly a job for automobiles, and if Henry Ford had been born before George Stephenson, a lot of these little local railroads would never have been built. It's lucky that the Bermuda line was not a branch of a large railroad, as so often happens in the U.S.—or maybe some regulatory body would have required its continued operation, regardless of losses.

CREATE COMPETITION—There's too much talk among railroaders about "meeting competition," according to J. W. Vigrass of Cleveland. Instead of just meeting it, railroads ought to be creating it—for the other fellow, of course.

TOO MUCH TRANSPORTATION—During the course of a week, I rode about 800 miles on a ship, the same distance in a plane, and more than double that distance on two trains. And there was one thing all three forms of transportation had in common—neither ship, nor plane, nor trains were more than half full. And, of course, most passenger vehicles on the highways are seldom more than half filled.

I don't suppose there is any place in the world, except North America, where so much money has been spent to provide far more transportation capacity than is used—except

here and there and now and then. There are always "bottle-necks" in any transportation system; and the strange thing is that, as new money is spent for transportation facilities, it usually doesn't go to remove the bottlenecks, but rather to duplicate existing facilities. Surely there's something screwy here.

FOUR GENERATIONS—Glenn G. Smith, agent for the LI at Flatbush Avenue station, Brooklyn, N.Y., tells of four generations of railroaders in his family. His grandfather, Daniel Smith, was a car builder for the Newport & Sherman Valley RR at Newport, Pa. His father, Banks Smith, had several railroad jobs, winding up his career as an agent for the Long Island. Glenn Smith's brother Brooke is an LI dispatcher, with two sons who are passenger conductors—hence fourth-generation railroaders.

PENN DUTCH—Ralph Stauffer, leading clerk for the Reading at Reading, Pa., has sent me some examples of the local Dutch dialect which, he says, is greatly different from standard German. Here is what a Pennsylvania Dutchman working for a railroad said: "When I started [began to work] for the railroad, I couldn't say norse [north] or souse [south] but now I can say bose [both]." This dialect is still heard in country districts, says Mr. Stauffer, but is on the way out; although there is a "Versommeling" (get-together) that assembles occasionally in Reading, and if you don't speak correct country Dutch there, they fine you a dollar.

My observation is that there are more railroad men who claim to be Pennsylvania Dutch than are so in fact—this being the justification they give for telling anecdotes in that dialect.



ON SHORTLINE AS WELL AS MAINLINE ROADS IT'S BENDIX FUEL INJECTION

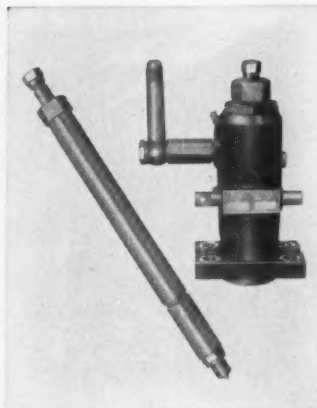
All over the country shortline railroads like those listed here are giving 'round-the-clock service that helps make the American railroad system the envy of the world.

Using 70-ton and 95-ton General Electric road switchers powered by Cooper-Bessemer engines with Bendix* Fuel Injection Equipment, these shortline roads maintain high operating standards in the performance of their important work.

• Bendix is proud that its fuel injection equipment has received such high endorsement from so many shortline railroad operators.

It furnishes further evidence that when dependable, efficient, and economical operation is a must Bendix is the logical choice for fuel injection equipment. SCINTILLA DIVISION OF BENDIX AVIATION CORP., SIDNEY, N.Y. EXPORT SALES AND SERVICE: BENDIX INTERNATIONAL DIVISION, 205 EAST 42ND ST., NEW YORK, N.Y.

* REG. U.S. PAT. OFF.



This Bendix pump and nozzle are used on the type of road switcher pictured above.

Partial list of shortline roads using Bendix Fuel Injection Equipment

ALBANY & NORTHERN
ARKANSAS & OZARKS
BALTIMORE & ANNAPOLIS
BARRE & CHELSEA
BELFAST & MOOSEHEAD LAKE
COLORADO & WYOMING
DES MOINES & CENTRAL IOWA
EAST ERIE COMMERCIAL
FT. DODGE, DES MOINES & SOUTHERN
FRANKFORT & CINCINNATI
GEORGIA NORTHERN
GREENVILLE & NORTHERN
HAMPTON & BRANCHVILLE
LANCASTER & CHESTER
LIVE OAK, PERRY & GULF
MISSISSIPPI EXPORT
MOBILE & GULF
MUNCIE & WESTERN
NORTHAMPTON & BATH
RAHWAY VALLEY
SANFORD & EASTERN
SOUTH GEORGIA
TALLULAH FALLS
VALDOSTA SOUTHERN
WASHINGTON & OLD DOMINION

Scintilla Division



CUT FUEL COST 50%

Since they switched
to "Jimmy" Diesel

Railroads are switching to General Motors Diesel engines in maintenance-of-way equipment for the same good reasons as in motive power. Look what happened when the Wabash Railroad replaced a gasoline engine with a "Jimmy" Diesel in this track cleaner.

Superintendent of Work Equipment R. S. Stephens reports a 50% reduction in fuel costs! A 3-cylinder GM Series 71 Diesel, replacing an 8-cylinder gasoline engine, uses only 10 to 25 gallons of low-cost fuel in 6 hours—average consumption about 3 gallons per hour. And the machine maintains steady production, loading 40 cubic yards of ballast into hopper in 10 minutes.

Thinking of repowering on- or off-track equipment? Thinking of buying a new tractor, loader, tie-tamper or ballast cleaner? You'll get work done faster and save on fuel and upkeep with GM 2-cycle Diesels. Single engines 30 to 300 h.p.; multiple units up to 893 h.p. Ask your GM Diesel distributor for the facts—or write us.

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Now—more than ever—
it pays to standardize on GM Diesel

—available in 1485 applications of
power equipment
built by more than 175 manufacturers



A GM "3-71" Diesel powers track cleaner used by Wabash Railroad near Decatur, Illinois



Proof of the Seal

This Bird Self-Sealing Tie Pad is removed for inspection after 5 years of service. Because of its tenacious seal, the pad had to be pried from the tie with an adze. Bird Self-Sealing Tie Pads maintain dimensional stability . . . cannot stretch or compress . . . provide a constant unbroken seal.

Proof of the Protection

Unretouched photograph of cross section of tie shows underplate area, including spike holes, after 10 years' protection by Bird Self-Sealing Tie Pad. There is no trace of the destructive effects of moisture and abrasion in these vulnerable areas. Moisture and abrasive materials could not penetrate the seal.



Effective Tie Pad Performance Depends on the Seal...

and you get Proof of the Seal with BIRD Self-Sealing Tie Pads

The performance of tie pads depends on the permanent and effective seal between the pad and the tie. Any tie pad that is not securely sealed to the tie simply provides a shelter for accumulated moisture and abra-

sive materials. These destructive agents cause the breakdown of the supporting power of the tie under the plate and the holding power of the spike wood.

Bird Self-Sealing Tie Pads are the *only* tie pads whose durable and effective seal with the tie has been proved through years of in-track service. Actual in-track installation also proves that Bird Self-Sealing Tie Pads increase tie life sufficiently to pay the cost of tie pads many times over. These savings represent a substantial reduction in track maintenance costs.

In your '58 budget plans, be sure to allow for Bird Self-Sealing Tie Pads. For an interesting booklet giving facts and figures on dollar savings, write to Bird Tie Pads, East Walpole, Massachusetts, Department HRA

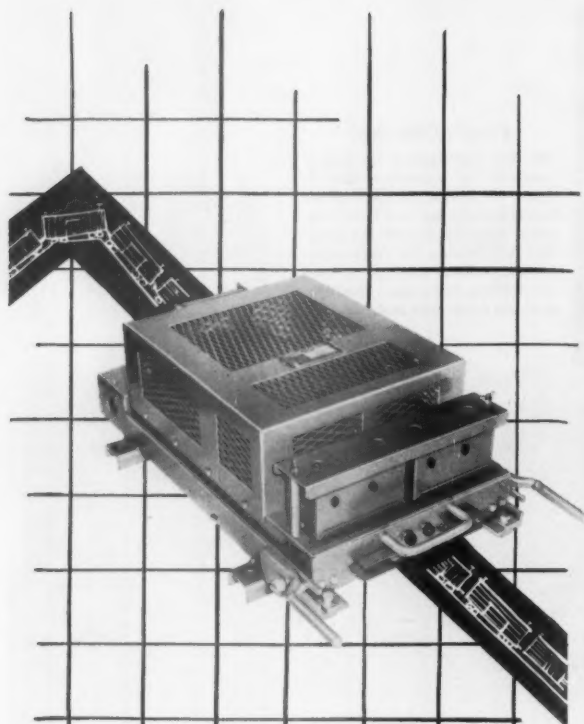
Bird Self-Sealing Tie Pads Are Recommended For:

Bridge Decks • Curves • Switch Timbers
Highway Grade Crossings and Other
Paved Areas • Crossing Frogs
Insulated Joints • With Smaller Tie Plates
Pile Cutoffs • Through Station Platforms
Out-of-Face Installations in Rail-Laying
Programs • Sandy Locations
All other locations where tie life is
short or replacement costs are high.

Buy the Best...



Buy BIRD



In communications—

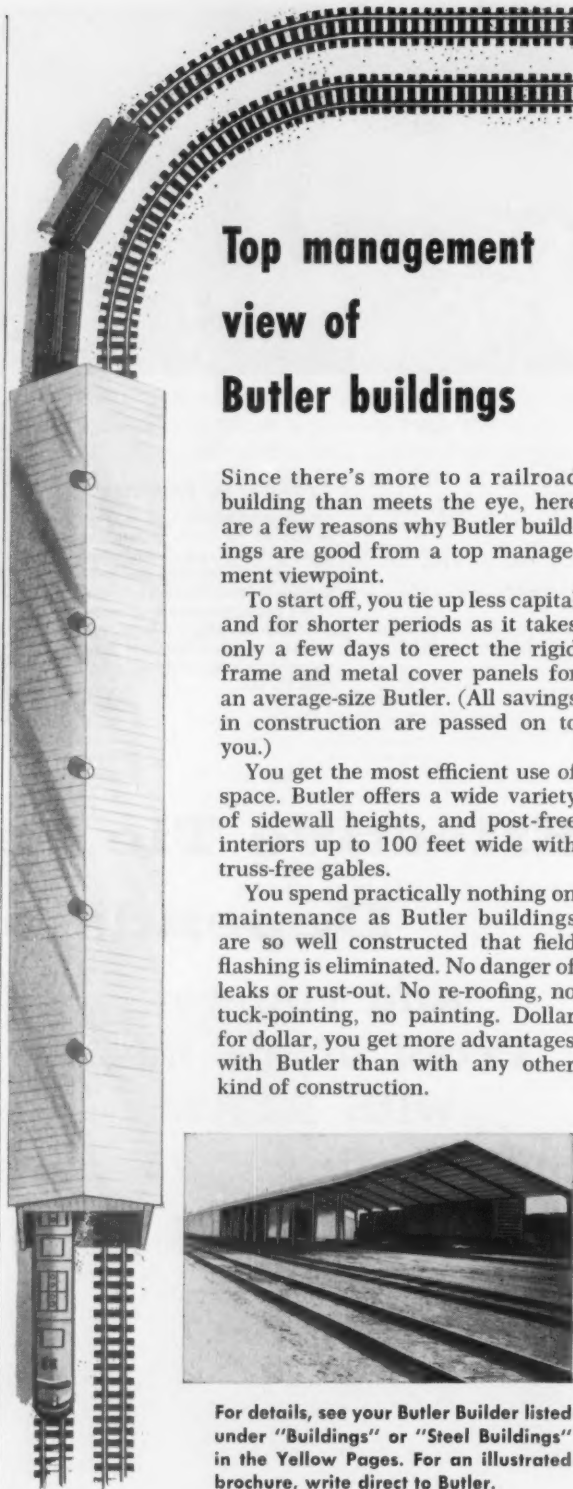
Only independent AC power will keep your costs down

Here's why: Communications equipment designed to operate from 110 volts AC is less complicated, more economical, far easier to service, and lower in first cost. Identical equipment can be used throughout the system, with resultant reduction in parts inventory. Cornell-Dubilier Inverters will operate this equipment from any standard battery source . . . and run it at top efficiency, day after day. For complete technical data on economical conversion from 12V., 32V., 64V., and 120V. D-C to 110V. A-C, or for engineering consultation, write to Cornell-Dubilier Electric Corporation, Dept. RA-10, 2900 Columbia Ave., Indianapolis, Ind.

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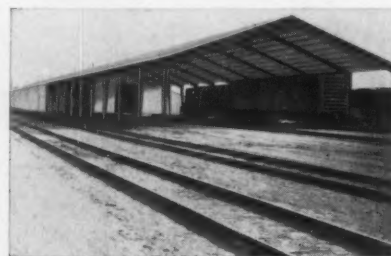
Top management view of Butler buildings

Since there's more to a railroad building than meets the eye, here are a few reasons why Butler buildings are good from a top management viewpoint.

To start off, you tie up less capital and for shorter periods as it takes only a few days to erect the rigid frame and metal cover panels for an average-size Butler. (All savings in construction are passed on to you.)

You get the most efficient use of space. Butler offers a wide variety of sidewall heights, and post-free interiors up to 100 feet wide with truss-free gables.

You spend practically nothing on maintenance as Butler buildings are so well constructed that field flashing is eliminated. No danger of leaks or rust-out. No re-roofing, no tuck-pointing, no painting. Dollar for dollar, you get more advantages with Butler than with any other kind of construction.



For details, see your Butler Builder listed under "Buildings" or "Steel Buildings" in the Yellow Pages. For an illustrated brochure, write direct to Butler.



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Time Is on Russia's Side

Two weeks ago, in our October 7th Outrage issue, our report to Congress included these observations...

- Today, America's industrial supremacy and whole world position is being challenged by nations which have no thought of losing the fight.
- Will we hold our world markets? Will we stay ahead in the arms race? Will capitalism outperform communism?
- A big part of the answer will depend on the efficiency of our transportation system.
- In Russia, a 15-year plan now in full swing points to vast improvement in the Soviet rail system, including complete changeover to electric and diesel power. It's an ambitious program that U. S. railroads, under present repressive conditions, can hardly hope to match.
- From what we know, the Russians are building railroads all the time. We in America are building almost none. The reason should be clear from our report: unequal taxes, unequal regulation and unequal subsidization are preventing the railroads from earning the growth money they need to serve America to the best of their technical ability.

Now that Russia's moon is over Miami and all other American cities, our pooh-poohing of the Russian challenge is as dated as pooh-poohing the Milwaukee Braves.

We ARE in for the fight of our lives—however industrial and peaceful it may remain.

We DO need the healthiest and heartiest national life our brains and vigor can manage.

When you come right down to it, America is a giant manufacturing plant—and the main assembly line is our railroad system.

The railroad situation today is like a Hitchcock movie, which in turn is the basic nightmare pattern: the hero can see the catastrophe coming on—no one else can, no one else can be bothered.

What we need now is the movie ending: the hero makes the others see the danger, and the situation is saved at the last minute.

With Russia's ICBM ready to roar across oceans, with her satellite whizzing around the earth 15 times a day, the "last minute" doesn't look so far off in terms of historical time.

What those of us in and around the railroads can see—and most others can't—is this: America's main assembly line, its railroad system, is being banged and battered throughout the 48 states by inequitable taxes, one-sided regulation, and enormous subsidies to rival types of transportation.

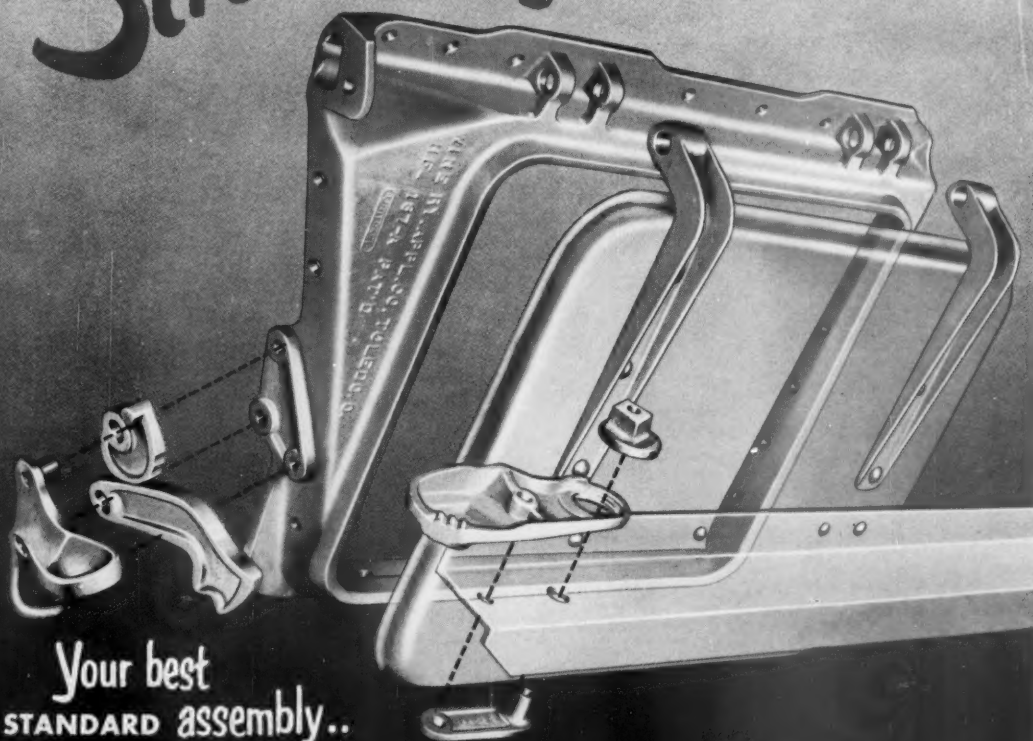
How we can work to make our fellow-Americans see this outrage will be the subject of many pages in *Railway Age* in the months ahead.

Already, the Outrage issue is building up a sizable following wave—three large railroads are reproducing it in their employees' magazines... with a circulation of 150,000, orders for reprints are pouring in, railroad officers are taking the occasion of the issue to get off to a fresh start in discussing the question with congressmen, legislators and regulators.

What are **your** ideas for effective action now, to awaken Americans to this outrage, and their desire to end it? Rush them to: The Editor, *Railway Age*, 30 Church St., New York 7.

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The Great Northern Railway recently pointed out the importance of improved yard and line facilities in realizing the full capabilities of Diesel locomotives.

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In addition, at strategic locations comprising 258 track miles of main line, the GN is using GRS centralized traffic control—including Syncroscan®, the high-speed electronic cTc system—to obtain great operating facility.

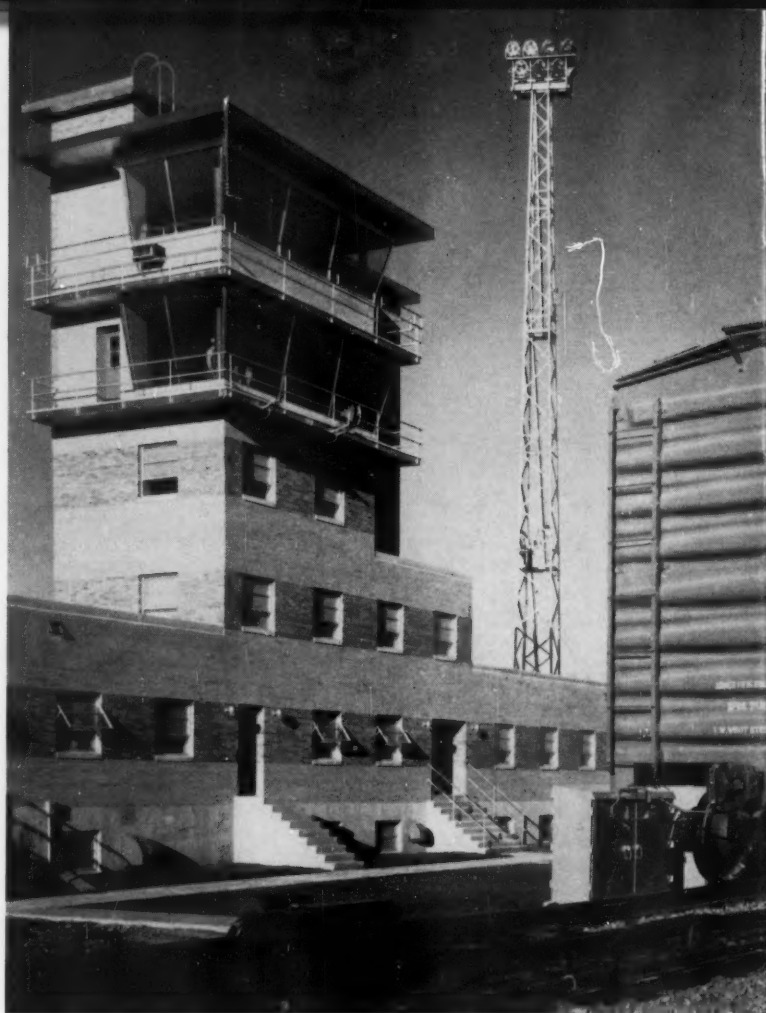
The results:

- Fewer locomotive hours lost because of yard and line delays.
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